COMPUTER GAMING WORLD

VOL. 2 NO. 4

JULY — AUGUST 1982

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From the Editor...

This is the fifth issue of COMPUTER GAMING WORLD. From the beginning CGW has sought to provide a forum for the computer gaming hobby and industry. We are very pleased with the response you have made thus far. From letters and responses to R.I.D. cards it is apparent that we are providing a needed service for thousands of computer gamers. We try with each issue to add new featurers or twists which make CGW a better magazine. The basic information box, Reader Input Device, Silicon Cerebrum, Atari Arcade, Real World Gaming, and screen photos are just some of the added features. We hope to add more as time goes along.

For example, we will add more pages as our advertising income allows. When you buy a product which you saw in CGW tell the company you read about them in CGW. The effectiveness of advertising is important to the manufacturers. They pay a lot more attention to your input than you might imagine.

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Psalm 9: 1-2

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COMPUTER GAMING WORLD

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LETTERS

Dear Editor:

As an Apple III owner, I have found several problems in game software designed for the Apple II. As many may know, the Apple III can emulate an Apple II, but there are limitations.

Until recently, the biggest limitation has been the lack of paddles. Before the new FCC regulations, all Apple II's were supplied with paddles, and almost all software manufacturers took advantage of this. Unfortunately, for the first six months that the Apple III was out, there were no paddles for them. There was no easy way to use the paddles designed for the Apple II either. Since then, a joystick has come out for the Apple III, BUT it will only work in emulation mode IF the software manufacturer uses the standard Apple paddle read write routines. To date, only one program, On-Line's **MISSILE DEFENSE,** has worked. This means I don't get to enjoy such classics as **SPACE EGGS** or **RASTER BLASTER** on my Apple III... ever.

More recently, Apple II programs have been coming out with keyboard versions. Usually, the keyboard versions are more difficult to play (such as Sirius' **SNEAKERS** -my favorite program, which makes them much easier to play. Some software houses, such as Picadilly, have several versions (Keyboard, Joystick, Paddles, Apple III Keyboard) on one disk. The Apple III Keyboard is also laid out differently, thus causing some problems for the uninitated.

The greatest threat lately has been a change in software protection. Many of the newer programs have protection schemes so sophisticated they fool my emulator. These programs do not even boot--they just make nasty noises. I am naming names here--Broederbund, IDSI, and Energy Games. Broederbund used to be my favorite software house, but I refuse to buy games from a company that doesn't have programs that work on my computer (No Broederbund software later than **APPLE PANIC** will boot). My Christmas package for my Apple was ruined by two programs that wouldn't boot–**TRICK SHOT** (IDSI) and **SANTA'S SLEIGH RIDE** (Energy Games). For those who think I might be kidding--I checked on a friend's Apple II, and all of the above-mentioned disks booted.

My New Year's Resolution (which I have kept until now) is: I won't buy programs that don't say they will run on my Apple III in emulation mode (although I will buy programs that will run in the Apple III native mode). This means a loss of about $2000 per year to the computer games industry from me alone. So long Broederbund -- I hope you change soon. I really enjoyed your games while I could use them. My favorite software company at the moment is Picadilly--mostly because they have an Apple III keyboard version on all their games.

Deirdre L. Maloy

MORE STRATEGY FOR EASTERN FRONT

Dear Editor;

I am an Atari 800 owner and I was glad to see your recent addition of a regular Atari column to your magazine. I have also enjoyed your coverage of Eastern Front--my favorite computer game.

Bob Proctor was clear and readable in "A Beginner's Guide to Strategy and Tactics in Eastern Front" but his article did little more than repeat Chris Crawford's own playing hints in the Eastern Front player manual. To whit: surround the Ruskies, don't try to march through them.

Interested readers and *dedicated gameplayers* are surely able to garner this information from the player manual without Bob's helping hand. Of more use (and more interest) might have been an article dealing with grander strategies and tactics which are not immediately obvious from reading the rules.

The good game, like the good player, has a specific strategy to which it tries to adhere. This game "personality" in Eastern Front is not very complicated, but it is effective. The German player must first discover what it is that the *Russian* units do, then develop an effective counter-strategy.

Logically, if Crawford's own notes in Eastern Front suggest surrounding the Russian units to destroy them, then his program's strategy must be to keep those units from being surrounded. This is indeed what happens during the game. Whenever the Russian units are outflanked, they retreat, trying at all times to maintain their lines of supply. This latter is crucial to the Russian units. They *cannot* be beaten back during the winter unless their strength is diminished. And the *only* way their strength can be diminished is by cutting their supply lines.

Knowing this simple fact, the German player must find ways to outflank the Russians. And he has an excellent tool to use: his superior mobility.

The German player must forever be involved in end runs. He must find clear sailing for his own units while forcing the Russians to retreat across water and woods.

High scores are possible using this strategy even without having to destroy large numbers of Russian units. The entire German army can be shifted north and begin a long trek eastward (along the northern bank of the Volga) at about Christmas time, which--with some fighting --will take the hard pressed German troops to the eastern edge of the board by March.

A more realistic and satisfying tactic is, as Bob Proctor suggested, to ignore the game score and try to truly *take Russia.* This involves eliminating as many Russian units as possible. My best game has left a total of six red squares on the board--all surrounded and facing eminent destruction in April.

Similar or better results can be accomplished by completing two crucial encirclements of the Russian troops.

The first, which must be completed by September 28 (before the mud sets in), brings panzer units northward from Kiev and the Pripet Marsh through the narrow gap between the Volga and Don Rivers. Once in firm position south of Moscow and moving at all possible speed, these units can stonewall the Russian retreat from the German infantry units pressing steadily east. When successful, this plan destroys all the Russian encampments in the woods south of Rahev. Any remaining Russian units will retreat east of the Volga and will not be able to return to the Moscow battlefield until the winter months. (Be sure to retreat the panzer units *before* October or they are likely to be bogged down and caught before the winter ice frees their movement again.) Only a small holding force is

needed in the south around Dnepropetrovsky--five or six infantry with the Hungarian panzer unit.

The second encirclement must be carefully timed due to the annoying tank reinforcements the Russians receive around Gorky. The Russians must be allowed to re-cross the Volga in order to slow their final retreat back toward the east.

Given that the German player controls the line from Smolensk to Moscow to just west of Gorky by winter, then an east-west line should be held no further north than Rahev. The Russians will push north through the woods east of Smolensk and west across the Volga toward Moscow.

While the Russians are on the offensive, the German player must run to the far north with his panzer units and whatever infantry is not needed in defense. (Some can be sent to take Leningrad.) These units then rush east and cross the Volga just east of Gorky--or perhaps even as far east as Kazan--and move south. Once they reach the open Russian plain, they will cut off supplies for the Russian counter attack forces around Moscow. The German units which were previously shaky in defense will be able to press attacks with no fear.

If the German player can also bring his southern force and reinforcements to bear on the Russians southern flank, then the entire Russian army will begin to shrink and disappear inside the white circle. Alternatively, these latter German units can press east and take Stalingrad. But obliterating the Russians is much more fun than taking a featureless city.

This second encirclement procedure is satisfying but tricky. The Russians will desperately attempt to break through the German armor and, once out of the trap, they have an excellent chance to remain at bay until the end of the game. There are also a few Russian reinforcements (cavalry particularly) which arrive at the eastern edge of the board and must be drawn westward toward death.

A picture to keep in mind is the white German units strung out from west to east north of the Volga--the panzers in front, the infantry lagging behind. The red Russian units press north to attempt to break this extending line, but the Volga slows their movement and effective defensive placement clogs their advances. Eventually this long white line begins to swing south, like a door on its hinges. The large red mass of Russian units is then pricked by white and slowly shrinks...until the door slams shut.

Good luck to all Eastern Front players and Computer Gaming World. I look forward to more in-depth gaming articles and your continued success.

Ed. — Thank you for some excellent strategic suggestions for Eastern Front. Your letter seems to indicate, however, that you did not take note of the title of Bob's article or the explicit statement in the third paragraph of the article; to wit-- "This article is written for those of you with little or no wargaming experience." Many of our Atari readers indicate that the article was helpful to them even with a good deal of wargaming experience. I found the article of help to me (beyond what was offered in the rulebook). None-the-less your strategic suggestions are appreciated and I know will be of interest to our readers.

NOTICE TO ROBOTWAR ENTHUSIASTS

Robotwar enthusiasts will be glad to know that there is an organization being formed to sponsor Robotwar tournaments on an ongoing basis. Frank Krough of North Hollywood, California has formed a Robotwar club for the purpose of holding local and postal Robotwar tournaments. If you live in the Southern California area you may want to get directly involved with the local tournaments. For those of you that live elsewhere, check out the postal Robotwar tournaments Frank's group will be running.

Entry fee for a tournament will be $4.00 which will cover handling charges and prizes. Tournaments will be classified as either novice, master, or champion. If you want more information drop Frank a note:

Frank Krogh
P.O. Box 5337
North Hollywood, CA 91616

HOBBY AND INDUSTRY NEWS

Avalon Hill has announced that they will begin developing game cartridges for the ATARI VCS and MATTEL INTELLIVISION game systems.

Program Design of Greenwich, Connecticut has released **MOONBASE IO** and **STARSHIP DUEL** for the Atari 400/800. MI combines an arcade/adventure format with a voice narration. Game consists of disk and voice cassette. SD is a cassette game of starship combat.

Hayden Book Company (50 Essex St., Rochelle Park, NJ 07662) announces the release of **TETRAD,** a four-level Tic-Tac-Toe game for the Apple II, and **TRS-80 GALAXY OF GAMES,** which includes four games for the TRS-80 computer (level II 16K). The four games are *Hangman, One Arm Bandit, Skunk, Jacks.*

Acorn Software (634 North Carolina Ave., S.E., Washington D.C. 20003) announces a series of machine language adventures for the TRS-80 Model I/III entitled **MYSTERIOUS ADVENTURERS.** Written by a chap in England the series makes use of "proper English". The first release in the series is **ARROW OF DEATH PT. 1.**

JON FREEMAN and **ANNE WESTFALL** have left Automated Simulations to form **FREE FALL ASSOCIATES,** a game design and development firm. Jon's credentials include *Rescue at Rigel; Crush, Crumble, & Chomp; The Playboy Winner's Guide to Board Games* (book); and *The Complete Book of Wargames* (book). Jon was a co-founder of Automated Simulations. Anne's background includes extensive experience in the programming field from business to game applications. She was formerly the Senior Software Engineer at Automated Simulations. **FREE FALL** can be reached at 3888 Corina Way, Palo Alto, CA 94303.

Computerware (Box 668 Encinitas, Ca 92024) has released **STARSHIP CHAMELEON** for the Radio Shack Color Computer (disk or cassette, 16K required. **SC** is a space combat game in which the player controlling the starship Chameleon protects a planet from an aerial attack of enemy invaders ($29.95).

The Liberty Software Co. (635 Independence Av. S.E., Washington, D.C., 20003) has released **MEDIEVAL MAGIC,** a new adventure game for the TRS-80 Model I/III. MM was written "especially as an introduction to the adventure format of game playing".

Automated Simulations has released several new titles for the Atari 400/800 computer. **ALIEN GARDEN** is an arcade game available on ROM cartridge ($39.95). Four new releases in the adventure game area by Automated are mentioned in this issue's installment of *Atari Arcade.*

Strategic Simulations will be releasing **GALACTIC GLADIATORS** (Computer Ambush in space) in Late June or early July. GG featurers individual combat, maps, scenario designing routines. Speaking of **COMPUTER AMBUSH,** the long pro mised updated version is on temporary hold. They hope for a fall release but winter is more likely. **GUADALCANAL CAMPAIGN** is now slated for a middle of July release. An improved **WARP FACTOR** will be released for the IBM PC in middle July. The IBM version will feature graphic display of combat. The computer opponent in the IBM version will be three times faster than the Apple version.

The Appler version of **CYTRON MASTERS** should be out by the time you read this. The Atari version of CM should be out in August or September. Paul Murray's new space combat game **THE COSMIC BALANCE** (or "Son of Warp Factor") will be out in mid-July for the Apple. SSI hopes to have the Atari version available at the same time, otherwise look for the Atari version at the end of summer. TCB will be a joined later by a strategic space game in which TCB will be used to fight tactical battles generated by the strategic game.

BACK ISSUES ARE AVAILABLE

Send $2.75 plus $1.00 postage and handling per copy

1.1 — The Future of Computer Wargaming; Torpedo Fire; Robotwar; B-1 Nuclear Bomber; Crush, Crumble and Chomp; President Elect; Baseball Tournament; and more.

2.1 — Napoleon's Campaigns 1813 & 1815; The Swordthrust Series; Galaxy; Castle Wolfenstein; Tanktics; Baseball Tournament (Pt. 2); Operation Apocalypse; and more.

2.2 — Southern Command; So You Want to Write a Computer Game; Napoleon's Campaigns Designer's Notes; Blackjack Master; The Current State of Computer Documentation; Robotwar Tournament Winner; Tigers in the Snow; Bug Attack; David's Midnight Magic; and more.

2.3 — Wizardry; Tactics in Eastern Front; Time Zone Interview; Voyager I; West Coast Computer Faire Photos; Long Distance Gaming; Jabbertalky; Baseball Tournament Results; Olympic Decathalon; Lunar Lander (TRS-80); Swashbuckler; Silicon Cerebrum; Atari Arcade; Writing For CGW; and more!

INITIAL COMMENTS

In addition to games mentioned elsewhere in this issue the following games have been received by CGW. Most but not all of these games will receive more detailed attention in future issues.

Muse Software
347 North Charles St.
Baltimore, MD 21201

SUPER TEXT 40/80 COLUMN DISPLAY: SUPER TEXT 40/80 is a new and better version of Muse's popular SUPER TEXT II word processor. Features of the new package include: 40 or 80 column display; page headers and footers; user definable key; type-ahead buffer; counter occurances of words/phrases; display of available disk space; split screen; multi-file find and replace; and others. We look forward to using SUPER TEXT 40/80 as our regular word processor at CGW as soon as we get an 80 column board.

FIREBUG: A game of arson. Although the fiction of the game is regretable, this is one of the better low-res graphic games available for the Apple. In FIREBUG you go around dropping gas cans in order to spread the fire being fueled by a fuse which follows you. If you don't move fast enough the fuse will catch up and you'll "make an ash" out of yourself. Can be played with keyboard control or a joystick.

Data Soft Inc.
19519 Business Center Dr.
Northridge, CA 91324

TEXT WIZARD: TW is a word processor for the Atari 400/800. Using 50 different commands Text Wizard can do all the normal features of a word processor (such as insert, delete, replace, search, reposition, etc.). Additionally TW can print multi-copies, use multiple type lettering (bold, elongated, condensed, normal) and provide for proportional spacing of the document. Documentation is clear and easy to follow. TEXT WIZARD is CGW's Atari 800 word processor.

Data Most
9748 Cozycroft Ave.
Chatsworth, CA 91311

WORLD SERIES BASEBALL: This is the old Programma Baseball game that first came out back in 1979. The game is the same even down to the same colorful introductory sequence which includes a redention of "Take me out to the ball game". It is still a very good "beer-and-pretzels" baseball game. Written by Charles Sullivan Jr.

Broderbund Software
1938 Fourth St.
San Rafael, CA 94901

DUELING DIGITS: Here is an educational game that makes use of hi-res graphics and can be played by anyone who can add 1+1. It is interesting as a competitive game and can help teach younger persons basic math skills. One or two can play, but solitaire play is only a shadow of the two player game.

The New American Library
1633 Broadway
New York, NY 10019

BUYING AND BEATING THE HOME VIDEO GAMES: A thick paperback (676 pages) filled with interesting information on the home video game field. The book includes: tips and strategies on more than 200 games; descriptions and analysis of five home video systems (Atari VCS, Intellivision, Odyssey, Astrocade, Fairchild Channel F); playability ratings and skill levels. This SIGNET paperback sells for $3.95 and is worth checking out.

Synergistic Software
830 N. Riverside Dr. Suite 201
Renton, WA 98055

NIGHTMARE GALLERY: NG has a lot of the flavor of the popular coin-op game CENTIPEDE. Various creatures parade up, down, and across the screen as you attempt to shoot them. If you like Centipede or Cavalier's BUG ATTACK you'll like NIGHTMARE GALLERY. The shound effects include an amazingly realistic "scream".

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THE WARP FACTOR:
Strategies for Winning Decisive Victories

by William Edmunds

BASIC INFORMATION

NAME:	The Warp Factor
TYPE:	Tactical Space Wargame
SYSTEM:	Apple II, IBM PC (July) — IBM 64k C or B/W (July)
FORMAT:	Diskette
# PLAYERS:	1 or 2
AUTHOR:	Paul Murray & Bruce Clayton
PRICE:	$39.95
PUBLISHER:	Strategic Simulations Inc. 456 Fairchild Dr., Suite 108 Mountain View, CA. 94043

If you are like me the first time you played THE WARP FACTOR you chose an Alliance Cruiser, which you named Enterprise, with the intention of destroying a Klarson starship. But after being smacked left and right by drones and stung time and again by disruptor bolts and phasers your shields began to fail with many weapons being put out of action until, eventually, the Enterprise was destroyed.

I think I played that scenario another four times before I finally destroyed that nasty Gorm, and my ship was so chewed up that I only achieved a draw. The fact that the computer plays a very good defensive strategy, coupled with a few other factors makes it extremely difficult to score a decisive victory in this scenario. But the computer as an opponent does have weaknesses which we are going to discuss, along with a few strategies that will exploit these weaknesses. By using these strategies you will be able to win a decisive victory in most any scenario you want to devise.

* * *

So why is it so difficult to score a decisive victory against a Klarson Cruiser? First the Starship Point Values are unbalanced, and therefore the scoring system is invalid. Both Cruisers have a point value of six. In games where both sides are about even, the only way to score a decisive victory is to capture the enemy ships while sustaining little or no damage to your own. And it is very difficult to do that since the Alliance Cruiser is an inferior ship when compared to the Klarson Cruiser. The Klarson has four disruptor bolts that can fire every turn while the Alliance ship has four photon torpedoes that can only fire every other turn. It's true the photon torpedoes have twice the destructive power of the disruptors but they require four times as much energy to charge and I don't believe they are as accurate when fired. The Klarson can turn faster which makes it more maneuverable. They also have drones which can reek havoc on your shield protection. And finally, the Klarson ships have more transporters than the comparable Alliance version. This makes it very difficult to capture the Klarson even in the best of circumstances because you can't get enough marines aboard the vessel.

Captured ships are worth twice as many victory points as destroyed ships. But capturing ships is much more difficult than destroying them. As a result, you should design your scenarios such that they allow you to *destroy* the enemy ships while *still* scoring a decisive victory (i.e. scoring a large number of victory points). In order to do this you should give the computer a ship or fleet with a total point value that is fifty percent greater than your own. This may sound like an invitation to disaster but need not be if the matchups are well thought out. The point values assigned to various ships are not always accurate. I've already shown you that the Cruisers are not really equal.

An Imperial Raider is worth two points and a Klarson Cruiser, six. If you put a Cruiser against three Imperial ships the computer would consider the match even. The Imperial ships each have one disrupter bolt and two light phasers. As a fleet they have three disrupters against the Cruisers four, six light phasers versus nine, three unit shields against the Cruiser's average shield strength of twenty, and the Cruiser also has drones which the Raiders do not. The Klarson side would win without a struggle. You could double the number of Raiders and the Cruiser would still have the game. I consider this scenario to be the ultimate mismatch and it demonstrates that by taking the best ships for the points allowed, you can overcome at least some of the enemy's mathematical edge.

Another way to victory is to take advantage of the enemy's weakness. In developing our strategy we must understand how the enemy operates. You can get a good idea on some of the tactics the program uses by reading the Operations Manual. One such tactic, taken from the manual, is to "maximize your firepower". This means to coordinate as many weapons as possible to fire in the shortest possible time at the shortest possible distance. This is a good concept but the program often follows this rule to the extreme. If you are attacking with a fleet of fighters, the computer will train all its phasers on the lead ship and use the "last instant" command for firing. Suppose these fighters are attacking a Starbase. Now the Starbase has enough fire power to destroy the fleet in a single turn but it would take the computer one turn for each ship. Because the computer cannot distinguish a case of overkill, you have the ability to sacrifice one ship, or use it as a decoy, while the rest of the fleet attacks the enemy with little fear of being fired upon. This is the most valuable strategy you have for fleet operations and will be demonstrated in a number of the scenarios at the end of this discussion.

If you have only one ship then it is going to be the object of this maximized fire power with nowhere to hide. Normally, the computer reinforces and tries to keep its forward shield facing your ship as long as possible. If you are trying to maneuver around to one side, it will turn in that direction thus making it difficult for you to get a good shot without risking a good retaliatory blow. The way the computer determines your course of action is to examine your position, heading and speed at the end of a turn. You telegraph your intentions every turn by your final position. By sending false signals at the end of a turn, you can fool the computer into turning one way while you go the other once the next turn starts. Once you leave the arc of his facing shield, his weapons will fire and you are then free to move in close and fire on an unreinforced shield. This ability to decoy the enemy ship will prove most valuable in single ship encounters such as a Cruiser versus a Dreadnought.

Your basic tactical objective is to destroy a shield so you can damage

RENDEZVOUS: A Space Shuttle Simulator

by Stanley Greenlaw

BASIC INFORMATION

NAME:	Rendezous
TYPE:	Space Flight Simulation
SYSTEM:	Apple II (48K)
FORMAT:	Disk
# PLAYERS:	1
AUTHOR:	Dr. Wes Huntress (JPL)
PRICE:	$39.95
PUBLISHER:	Edu-Ware Services P.O. Box 22222 Agoura, CA 91301

Sub Logic's **FLIGHT SIMULATOR** (see May-June 1982 issue of CGW) and Muse's **THREE MILE ISLAND** must make room for another outstanding example of a simulator for a microcomputer. RENDEZVOUS, by Edu-Ware is a well designed simulation of a space shuttle flight and space station rendezvous and docking. From launch to docking the gamer/student must learn how to make use of basic physics to orbit, rendezvous, and maneuver his shuttle close enough to dock the shuttle with an orbiting space station.

The simulation is structured into four segments, each of which can be "played" separately as a stand alone exercise or in sequence to simulate the flight from launch to docking.

The first segment, *Earth Liftoff,* involves launching the shuttle into a partial orbit. Arbitrary parameters of 191 kilometers altitude and 7800 Meters per second horizontal speed must be obtained to cause the program to transit to the second segment, *Orbital Rendezvous.* The initial orbit path set up by the liftoff must first be adjusted to an orbit path that won't carry the shuttle back into the atmosphere. Then the player must, through one or usually two engine firing sequences bring the shuttle into close proximity of the space station. At this point the player must make an approach to the immediate vicinity of the station. Once the shuttle is within two kilometers of the station, the program will switch to the *Alignment and Docking* phase. In this final phase the player attempts to dock the shuttle in a large landing bay.

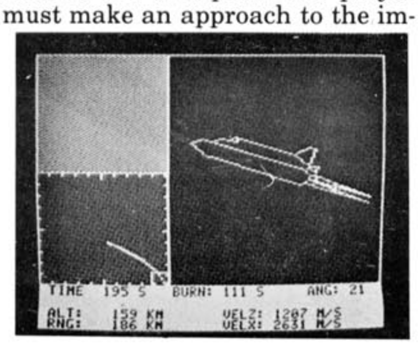
The *Earth Liftoff* phase challenges the player to attain the minimum orbit configurations using only the fuel in the solid fuel boosters and external fuel tank. Any use of fuel from the fuel tanks onboard the shuttle proper takes away from critically needed maneuverability in the other segments. A successful partial orbit can be achieved in the following manner: At about 15 seconds into the flight begin tipping the nose of the shuttle off the horizontal, steadily reduce the angle so that the shuttle is on a 30 degree angle when the solid fuel boosters jettison. Continue to reduce the angle until the shuttle is only 15 degrees above horizontal. If you leave the shuttle at 15 degrees, a partial orbit will be achieved and the program will switch to the Orbital Rendezvous.

The *Orbital Rendezvous* requires a series of trial and error attempts at getting the shuttle's orbit to cross the station's orbit at the same time that the two crafts pass the intersection. If you blast off at zero seconds on the mission clock in the Earth Liftoff mode you will find the shuttle reaching orbit "ahead" of the station. You must either slow down (with the threat of plunging in the atmosphere) or adopt an orbit inside the station's orbit (i.e. less than 1.50 earth radii) and patiently wait for the shuttle to accomplish the several orbits necessary to "catch up" to the station. You may find it easier simply to wait for 30 seconds to pass on the mission clock before lifting off. This will most likely put you in a desirable position for an engine burn to rendezvous with the station (i.e. inside the station's orbit and slightly behind the station.

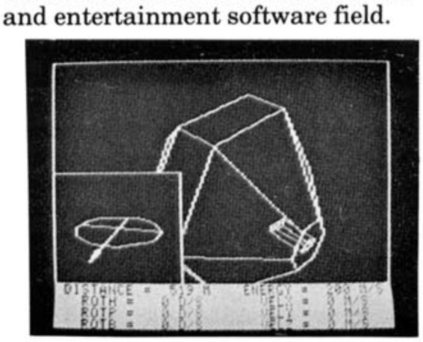
After you get the shuttle close enough to the station to enter the *Approach and Docking* mode, you will be required to use either a joystick or keyboard controls to make your approach and docking. The key to success from here on is practice, practice, practice. Fortunately the program allows you to save your position so that you can return for another approach in case your prior attempt ends tragically.

The graphics and documentation are very good. I would have preferred a better rulebook illustration of the joystick controls, but with a little practice you can figure it out. The direction finder (available in the approach sequence) faces the wrong direction for my tastes. It's purpose is to show the relative location of the station when not visible out the shuttle window. The problem is that the direction finder is orientated in such a way that the simulated shuttle in the "finder" is aimed at the viewer rather than along the line of sight of the viewer. In other words as you look at the range finder, the shuttle is coming at the player thus reversing "right" and "left". Flying "reverse" controls should be left to the remote control flying hobbists.

RENDEZVOUS is educational while being entertaining. Teachers will find it a valuable teaching tool in the areas of General Science, Earth Science, and Physics. As entertainment the simulation will appeal to gamers who enjoy mental challenges (such as those involved in setting up the orbital rendezvous) as well as to gamers who enjoy hand-eye co-ordination challenges (such as will be faced in the approach and docking segments). RENDEZVOUS is a welcome addition to the educational and entertainment software field.







the ship and knock out its weapons. If you are using photon torpedoes don't get too close before you fire them. If you get within 2Mk. of the target they become ineffective and you are left with only your phasers. It is better to fire your torpedoes and phasers as close as possible without running the danger of coming within 2Mk. of your target.

In using drones, unless you can create a drone swarm, never count on them to destroy a specific shield. Drones are unpredictable due to movement of the target and electronic counter measures. They seldom hit the shield you want or expect. A drone can best be used to soften the target by knocking out any general shield support. In this way it is not important which shield it hits and it increases the efficiency of your main weapons.

I believe one of the most important tactical weapons you have, and one the computer never uses, are your boarding parties. I cannot overstress the importance of allocating energy to your transporters. When attacking a larger ship you can do enough damage in one turn to knock out a shield but you will not normally be able to cripple its weapons. However boarding parties can sabotage a ship's weapons and make it possible for you to attack again on the next turn without sustaining a lot of damage yourself. How much damage they do will depend on their number and the level of damage already inflicted. This is because the Marines aboard the enemy vessel will resist yours. But one of the first areas to receive casualties are the Marines. So the more damage you inflict, the more damage your boarding parties can do.

If you are already in close to a target and want to fire your weapons on the first time point use the *range* command with a range greater than the range to the target. If you use the *time* command and the weapon in question will not fire through the facing shield, then that weapon will not fire at all during the turn. By using the *range* command, the weapon can still fire if you change course or the enemy should move in such a way that would bring the weapon to bear. This is especially important if you are going to sit and spin your ship because the program moves the ships first and then checks to fire weapons. This brings up an important defensive tactic. If you had a shield badly damaged or destroyed at the end of the last turn, you can usually reinforce one of the shields next to it and turn it toward the enemy before he can fire.

Here are a couple of important technical observations that you should remember. First, when firing weapons using the last instant option, the weapon must be capable of firing through the facing shield at the start of the turn. If you are commanding a Dreadnought and your target is facing shield two, you cannot fire your siege phaser the last instant even if you turn and move toward the target. Second, the phaser field of fire for the Alliance and Klarson Cruisers are inaccurately depicted on the Starship Data Cards. This can be most troublesome when entering firing commands. I've constructed a chart to cross reference the phasers with the shields. By reading across you can see through which shields a phaser will fire and by selecting a shield and reading down determine which phasers will fire through that shield.

PHASER FIELD OF FIRE

Alliance Cruiser

		Shield					
		1	2	3	4	5	6
Phaser	1	X	X				X
	2	X	X				X
	3	X			X		X
	4	X			X		X
	5	X	X		X		
	6	X	X		X		

Klarson Cruiser

		Shield					
		1	2	3	4	5	6
Phaser	1	X	X		X		X
	2	X			X	X	X
	3	X	X	X	X		
	4				X	X	X
	5				X	X	X
	6		X	X	X		
	7		X	X	X		
	8			X		X	X

SCENARIOS

Here are some scenarios which if executed property against a computer controlled opponent will result in decisive victories.

Cruiser vs. Dreadnought

In this game you will use the decoy tactic along with the Klarson's maneuverability to strike a Dreadnought in the flank and cripple it.

In the first turn set your speed at 12 to 14Mk. Move straight at the Dreadnought for twelve time points and then turn and finish the turn on a heading of 030 degrees. Launch a type one drone on this and the next turn.

The Dreadnought will assume you're going to try and move up on its right side. In the next turn it will continue to move toward you and turn slowly to the right in an effort to keep its forward shield facing you. Set your speed for 20 Mk., overcharge your disruptor bolts and energize your transporters. Turn right to 090 for four time points and then start turning back toward the Dreadnought. You want to cross directly in front of the Dreadnought at a range of 8 to 10 Mk. with a heading of about 330. Once you achieve this continue turning left for the remainder of the turn. Set your disruptors and phasers to fire at a range of 3 Mk.

The Dreadnought's phasers will fire when you leave its facing shield. You should still be more than 10 Mk. away at this point and your shields will absorb the damage. Your main blow will hit the Dreadnought in shield 5 or 6 at a range of 3 Mk. This will do sufficient damage to get your boarding parties aboard and knock out many of its weapons.

On the next turn, hold your position and fire all your weapons in an effort to destroy another shield and get more boarding parties transported. The Dreadnought probably won't move on this turn so next turn you may be able to shoot at the same shield. Continue destroying shields and transporting boarding parties until the Dreadnought is destroyed.

An interesting variation to this scenario is to use a Klarson Dreadnought and give the computer two Alliance Cruisers. You'll need a little more speed on the first turn and more moderate turns on the second Launch type two drones at the second Cruiser while attacking the lead ship. With eight transporters you have a good chance of capturing a Cruiser.

Freighter and Fighter vs. three Imperial Raiders

This is a short game but you can make it more challenging by giving the computer a fourth Raider. You will use the Freighter with its larger shields as a screen for the Fighter.

On the first turn move your Freighter straight at the enemy at a speed of 11 Mk. You don't want to decoy on this turn because your drones will have a better chance of hitting if the

Continued on pg. 37



WE'RE IN THE MONEY...

Economic Simulations For The Apple

by Bob Proctor

BASIC INFORMATION

NAME:	Computer Stocks And Bonds	Wall Street
TYPE:	Stock Market game	Stock Market game
SYSTEM:	Apple, Atari, Pet, TRS-80, IBM	Apple II or Apple II+
FORMAT:	Diskette (also on tape)	Diskette
# PLAYERS:	1 to 6	1 to 9
AUTHOR:	Bob Garman	Donald Brown
PRICE:	$25.00 ($20 on tape)	$24.95
PUBLISHER:	Avalon Hill 4517 Harford Rd. Baltimore, MD 21214 (301) 254-5300	CE Software 801 73rd Street Des Moines, IA 50312 (515) 224-1992

NAME:	Cartels & Cutthroats	Conglomerates Collide
TYPE:	Business game	Business game
SYSTEM:	Apple II or Apple II+	Apple II or Apple II+
FORMAT:	Diskette	Diskette
# PLAYERS:	1 to 6	1 to 4
AUTHOR:	Dan Bunten	Mason, Mayne, Siegling
PRICE:	$39.95	$39.95
PUBLISHER:	Strategic Simulations Inc. 465 Fairchild Dr., Suite 108 Mountain View, CA 94043	RockRoy 7721 E. Gray Rd. Scottsdale, AZ 85260

The four games reviewed here fall into two groups. There are two stock market games, where each player is an investor, and two business games where each player is the President of a company.

Stock market games are easy to understand because they're based on the well known axiom, "Buy low, sell high." Invariably, the number of stocks, bonds and other investments available are much smaller than in real life. Here we have two well done games; one of which simulates day-to-day activity and one which simulates year-to-year decisions.

COMPUTER STOCKS AND BONDS

In COMPUTER STOCKS AND BONDS, each turn represents a year; a game being ten turns long (figure about 30 minutes to play with 3 or 4 people). You can't borrow or "leverage" (leveraging is buying something with funds that don't belong to you) in any way. You have a choice of nine stocks and one bond. The bond pays a simple 5% dividend, so that if you invest everything in bonds you'll turn your initial $5000 into $7900 -- with no risk! In effect, the bonds are just like a savings account. If you can't do better than this then it is a mistake to buy stocks. This lesson, that additional risk should pay additional dividends, is the basic lesson to be learned in the game.

The nine stocks are hypothetical companies and represent a cross-section of different stock types. There is a growth stock which can usually be expected to go up but pays very low dividends. There are risky stocks which offer "high" dividends -- as much as 7%. There are speculative stocks that offer no dividends at all but may double (or halve) their value in a single year. Dividend ratios, growth potential, and risk are the major factors to consider when you are going to hang on to stocks for a year or more. However, an important aspect of long-term investing is absent; there is no information about the economic climate that would give you a way of judging which

stocks will be best. Plausible reasons are given for very large gains and losses but these are after the fact: winning is largely a matter of luck. Two factors make this game unique: it is the only one of the four available for computers other than the Apple and it is the only one which needs only 32K of RAM (instead of 48K).

WALL STREET

In this game, each turn represents a single day instead of a year. Five turns make a week and a game lasts one or more weeks. There are no dividends here and no other forms of investment for comparison; just day-to-day trading in common stock. However, there are broker's fees whenever you buy or sell and there are interest payments on any money you borrow. The interest rate is about 20% per year, so the game feels *very* contemporary. You are also allowed to *sell short,* which means selling stock you don't have (yet), hoping that the price will fall before you have to deliver it.

There are 30 stocks from which to choose; all real companies, most of which are actually listed on the NYSE. They are grouped into six industries: *computers, entertainment, oil, automobiles, retail, and appliance manufacturers.* As with the real market, certain industries may show prominent trends, though individual stocks in that group may not follow them. Whereas I have yet to see a company go bankrupt in STOCKS AND BONDS, it is a distinct possibility in WALL STREET: IBM and GM seem as likely to go under as anybody else. All of your choices, then, are equally risky. You must "play" the market, speculating on the daily fluctuations (somewhat exaggerated) of the market.

What makes WALL STREET unique is your ability to buy information about the market. Knowing what will happen to a particular stock or industry group on a given day can help you to a quick fortune or avoid a catastrophic loss. There are six *levels of information* in the game. The lowest costs nothing and provides nothing. The next costs $10 per week and gives you (according to the 8-page rulebook) a 10% chance of getting a tip about any given event. In game terms, this means into one tip every 6 weeks or so. Each higher level costs 5 times as much as the next lower and gives you an additional 10% chance. Thus the highest, level 5, costs $6250 per week and gives you a 50% chance. At best, then, there's half a chance that you won't know about an event ahead of time. To give you perspective, let's say that the most common event, a 10% change one way or the other, will occur to a stock that costs $50 per share. In order to pay for the cost of information, you'd have to have 1250 shares of it -- $62,500 worth! It's not likely you'd have this much unless it were late in a long game; in other words, tips can cost more than they're worth.

Even if you could buy a large block of stock, it would certainly attract the attention of the other players. The order of play is set randomly by the computer so if you happen to be first then everyone else can copy you and cash in on your tip without having to pay for it. This means that if you have to play before your rivals, it might be better not to reveal what you know (but you still must pay for the information). Another type of player interaction concerns breaking codes. Each player's tips are delivered by means of a 4 to 5-digit number which is decoded with a "secret" number chosen by the player. This code is not hard to crack, particularly when you can see which stocks the player is buying and selling, so the wise player will change their secret number occasionally -- it can be done at the end of any week.

I don't think this game is realistic -- IBM won't go bankrupt in 2 weeks and real tips are free and unreliable rather than expensive and 100% reliable -- but the player interaction makes WALL STREET the most interesting stock market game yet.

CONGLOMERATES COLLIDE

We now move from the world of private investors to the world of corporations. In CONGLOMERATES COLLIDE, you are an executive of a large corporation. You are trying to expand your company by buying up other companies. There are always 20 companies to be bought, of varying size and profitability, and when they're gone the game is over. Basically, it is a very simple game. You must expand to win, but there are varying levels of risk to choose from. Low risk means slow growth; high risk (heavy borrowing and even selling some of your stock in your own company for extra cash) means faster growth. Which strategy is best depends upon interest rates, stock prices and timing. The first two fluctuate wildly and unpredictably. One would expect the characteristics of the 20 companies to change too, but they remain constant throughout the game.

There are three ways to play this game: two are solitaire and one is with one to three other people. Playing by yourself, you can either see how much you can expand in 15 turns or you can play the multi-player game against two opponents controlled by the computer. In all versions, the record high score is kept on the disk.

My greatest complaint with CONGLOMERATES COLLIDE is that the computer-controlled players apparently get extra help. They get enough cash every few turns so that you (or I) haven't a prayer of winning. Since their books can't be inspected, it's hard to say whether this is a program bug or a deliberate attempt to make

things "challenging." The other versions are error-free, but CONGLOMERATES COLLIDE is only moderately interesting. It does have flashy graphics but these are not important to the play of the game.

CARTELS & CUTTHROATS

This game is the best of the four reviewed here and one of the best available for the Apple. It is the most realistic, the most educational, and the most fun -- even my 11-year old son thinks so! Each player is the President of a small manufacturing company; all of which just happen to make the same product. They start out with identical resources and the winner is the player who amasses the most total income over the game. Each turn is a quarter year and the players agree how long the game will be beforehand. To give time for player interaction to develop, the game length should be at least eight turns, which takes about two hours. It is possible to quit at any point if you need to stop at a certain time. CARTELS & CUTTHROATS can be played solitaire as the computer will play one to five "hands"; you can also have a four-handed game with two people or some other combination. The game can be "open", where everyone sees what everybody else is doing, or it can be "closed", where each player plans secretly. There is also an option which lets you print everything on a printer, ideal for classroom use.

Each turn, you must decide how much raw material to buy, how much of your product you want to manufacture, at what price you will sell it, how much you will spend upon research and upon advertising. The computer determines the total demand for the product from general economic factors (which are predicted for you, roughly, a turn ahead) and sales for each firm are calculated. The public may favor the company with the lowest price, the best product, or the most advertising --this will depend on whether the product is a luxury, a necessity or a little of both. If demand is high, everyone may be able to sell all they can make, but if times get hard, the poorly-managed firms will find themselves losing money.

The players may expand their companies by buying new factories, can (and sometimes must!) stockpile raw materials in case of shortages or strikes, and must try to keep labor and production costs within reason or they will eat up profits. The results are presented each turn in the form of a set of realistic financial reports: profit & loss, balance sheet, inventory levels and a market summary to show you how you stack up against the others. There are also occasional memos and letters about research breakthroughs, labor disputes, and requests from charities. You can go over these reports in depth or skim them for the essentials; the game is enjoyable either way. At the end of each year, an annual report shows the current standings of all companies.

Any number of strategies may win but a good CARTELS & CUTTHROATS player, like a good manager, will always be aware of what the competition is doing. If you start to lose market share because ABC lowered their price, should you 1) drop yours to match; 2) cut back on production but keep your price up; or 3) gear up for ABC's share after they go out of business? There is much player interaction, even in the closed game. Unlike CARTELS & CUTTHROATS, the computer-controlled players are absolutely fair. They play a reasonable game, each with a different strategy, and are challenging to the beginner. As your skill increases, you'll find they are not too aggressive and can be beaten easily.

The documentation is excellent. The fifteen page rulebook explains the rules clearly; giving you an understanding of what is happening and includes strategy tips. There is enough information here to qualify this game as an introductory course for Micro-economics; in fact, at a recent seminar, CARTELS & CUTTHROATS was shown as an example of Computer-Assisted Instruction. Don't iet that fool you; it's a great game! ■



CONTROLLER: A Review

by Bill Willett

BASIC INFORMATION

NAME:	Controller
TYPE:	Real Time Simulation
SYSTEM:	Atari with 32K
FORMAT:	Disk
# PLAYERS:	One
AUTHOR:	Frank D. Kelley & William Volk
PRICE:	$30
PUBLISHER:	Avalon Hill Game Co. 4517 Harford Road Baltimore, MD. 21214 301-254-5300

Remember the movie Airplane? Picture the scene in the control tower exploding with complete confusion, the controller with mike in hand shouting out instructions to the pilot, all culminating with a 747 through the window. I felt just like the controller in Airport the first few times I tried my hand at Avalon Hill's CONTROLLER.

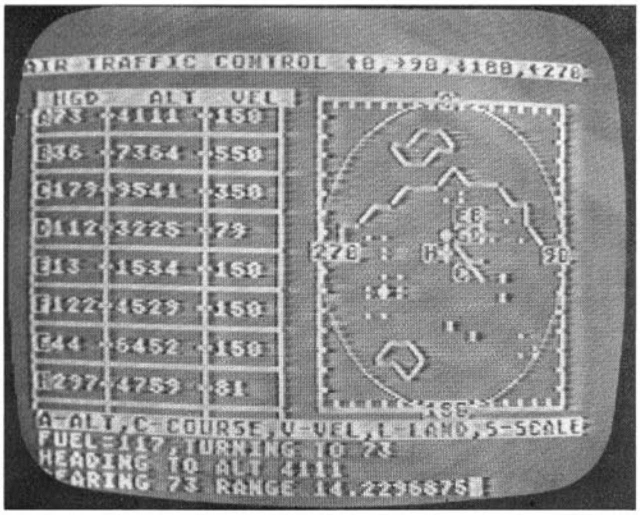
As the name implies, you, as the controller, take on the awesome task of safely guiding in eight aircraft before they crash, run out of fuel, or simply fly away (presumably to find safer facilities). This is a fine example of a game which runs in real time, but which has the sophistication of a complex simulation. Unlike most simulations written in basic, the computer does not just sit and wait for you to input your next command. If you're busy thinking, it's busy flying the eight planes. I've sat looking at the radar scope, frozen with indecision, getting more and more flustered as plane after plane crashes, flys away, or shoots right off the runway.

The disk is self-booting and, after a short wait, asks you the number of planes you'd like to control (1 to 8). You then select the type of planes. The three choices are;

a) Light plane: slow, maneuverable
b) Jet liner: fast, ponderous
c) Private jet: medium speed, medium control

Each type has it's unique characteristics of min and max speed, rate of turn and climb, ceiling, and fuel usage. All of these must be considered in order to successfully issue commands to the pilots.

Once you've picked your airplanes, the game starts. You're presented with a regularly updated table on the left side of the screen which gives the current heading, altitude, and velocity for each of the eight planes. To the right is a radar scope showing the location of each plane in relation to

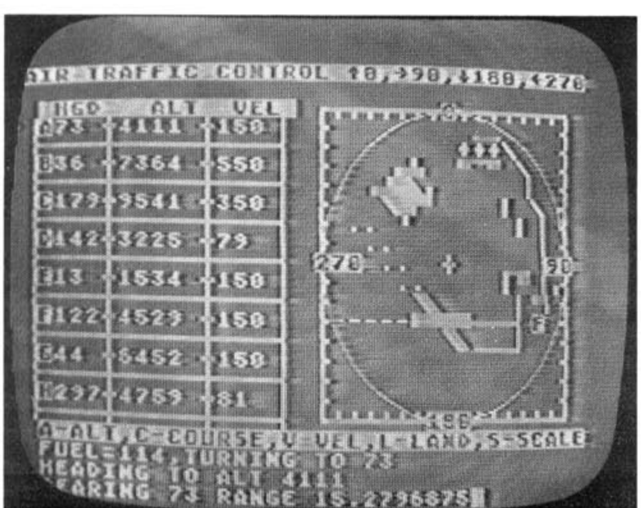


the control tower and two landing strips. This scope has two scales (10 and 100 mile radius) which can be toggled between by entering "S". At the bottom of the screen is data on a specific plane you have selected. This includes fuel left, last heading command, last altitude command, and bearing and range from the control tower.

In order to land an airplane it must be on the approach markers, have correct heading, be slow enough, and be low enough. You achieve this by giving each pilot instructions on altitude "A", heading "C", and velocity "V". Of course the time it takes for each of these to occur depends on the characteristics of the individual plane.

But, it's not as simple as that. If two planes are too close, you run the risk of mid-air collision. If you neglect a plane that is flying away from the tower it will fly away and you will loose contact. And finally, the toughest problem is running out of fuel. For example, if you make a private jet take two passes before it lands it's very likely it will run out of fuel.

The approach I've adopted is to go through all planes and head them towards the tower, then



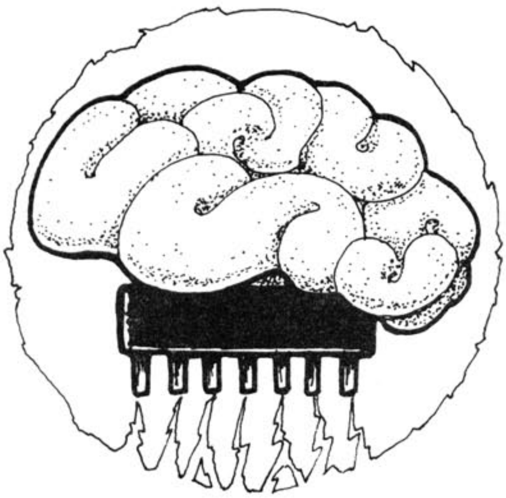
slow them all down to minimum speed to give me more time to think and to conserve fuel, and then to stratify all planes to altitudes that will prohibit collision. I then work on landing the closest to the field. This simple system does not take into account who is lowest on fuel, arranging not to have two or more planes arriving at the same time, or who is closest or farthest from the field. I have, using this method, been able to land six planes this way, three light and three jetliners. My two private planes ran out of fuel.

CONTROLLER is certainly a challenge. The closest analogy to the control process in this original game might be lunar lander in the way you must plan the effects of your commands in order to achieve the right results. However, CONTROLLER adds seven more landings not to mention one more dimension. This game requires you to learn the aircraft involved and develop processes to safely land them. After four long nights I could only land six planes (my average is four). At 10 to 35 minutes a game, getting CONTROLLER down pat may take a very long time. I would recommend CONTROLLER to those who would like a "thinking" game that doesn't let you dawdle around moving planes like chessmen. The arcade player, however, may be disappointed with the slow (real time) action of the game.

There are two items I would like to see investigated on future releases. The first is the real time command entry. All Basic programmers know the problem of stopping a program to service the players keyboard input when we'd rather be computing away. This can be solved if Basic looks at the keyboard and only stops to process an entry if one has occured. With CONTROLLER, if you input your commands too fast (when the program isn't ready for them) some of the entry may be lost. This can be frustrating with the tension of four or five planes all vying for the same landing strip within seconds of each other. Perhaps a small machine language keyboard handler that is triggered by the vertical blank display interrupt might work. This would allow normal keyboard input while Basic chugs along.

This touches on my second suggestion. Maybe more of the Atari's great features could have been included in the game. The Atari sound generator could supply radar beeps, plane crash explosions, and successful landing sounds. Also, more colors would enhance the display and make readability better. Of course these enhancements make a game very computer specific which has its obvious disadvantages when developing software.

As of this writing (May 1982) Avalon Hill has stated that an updated version of CONTROLLER is in the works. Perhaps we will see the above suggestions incorporated into a later version. ■



THE SILICON CEREBRUM

by Bruce Webster

MAP WEIGHTING (PART 2)

INTRODUCTION

Last issue we discussed an approach for allowing a game program to "look" at a hex map. The method assigns a value to each hex indicating who controls that spot and how strongly they control it. This is the algorithm used:

(1) Assign each map location one of three values:
  (a) if it's empty, assign zero (0);
  (b) if it's occupied by your side, assign some arbitrary value say, 50);
  (c) if it's occupied by the enemy, assign the opposite value (i.e., -50).
(2) Make a new copy of the map, with each location receiving its old value modified by the six hexes surrounding it:
  (a) increase it by one for adjacent hex containing a positive (non-zero) value;
  (b) decrease it by one for each adjacent hex containing a negative value.
(3) Copy the new map back into the old one.
(4) Repeat steps (2) and (3) some arbitrary number of times.

When you're done, each hex will contain some value. The sign of the value indicates who controls it (+ = you, - = them), while the magnitude of the value indicates how strong that influence is. Values near zero suggest weak control, while large values (either positive or negative) suggest strong control.

This technique works fine...assuming that the pieces don't move, that they all have the same combat strength, that they can't affect non-adjacent units, and that the map has uniform terrain. This, of course, leaves out most wargames. So, to be effective, we need to find some way of taking these different factors into account. Let's see how we can modify the algorithm above to adjust for each of these complications.

MOVEMENT

Given two units of equal strength, the one that moves faster exerts more influence. More accurately, the speedy unit exerts the same level of influence, but does it over a wider area. Since our algorithm is based on immobile units, we need to make some changes to account for unit movement.

Modifying part (1) of the algorithm is one solution. Originally, we placed an arbitrary value (positive or negative) in each occupied hex and zero in each unoccupied one. Now, for each unit, let's place values (of the appropriate sign) in all the hexes it can move to. We might want to reduce the influence by distance. Suppose we have a unit that can move up to 5 hexes, and we give its location a value of 50. Here are some possible assignments for the hexes it could move to:

distance	1	2	3
1 hex	25.0	40.0	50.0
2 hexes	16.7	30.0	12.5
3 hexes	12.5	20.0	5.6
4 hexes	10.0	10.0	3.1
5 hexes	8.3	0.0	2.0

Here are the equations used:

1) value : = 50 / (distance + 1);
2) value : =50 — (distance * 10);
3) value : =50 / (distance * distance);

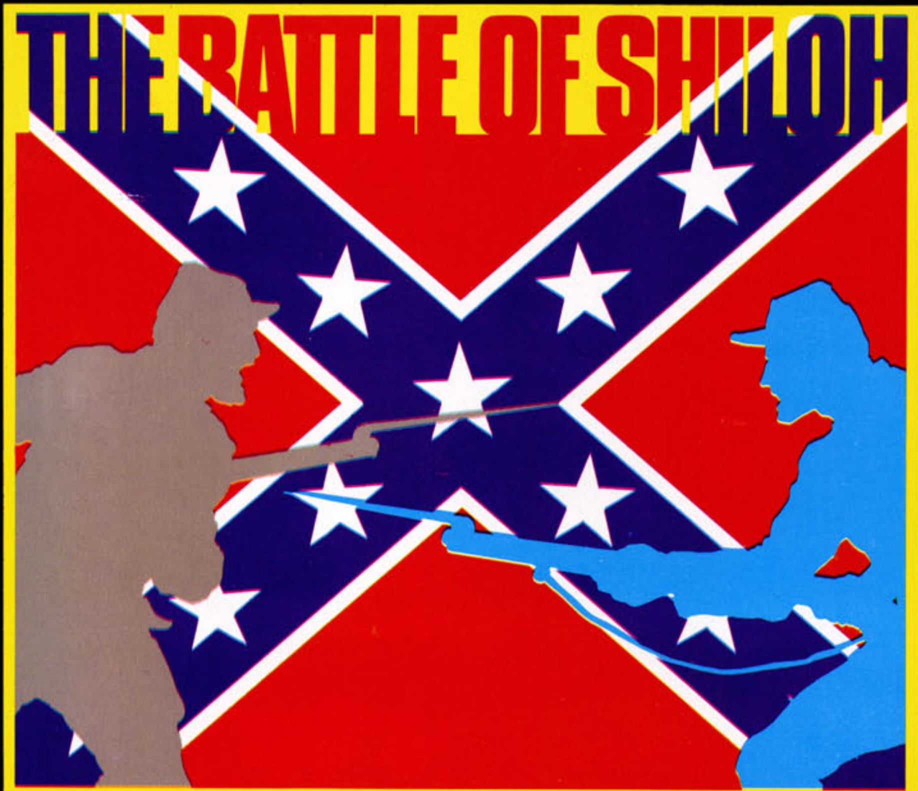
Which one to use? That depends on the game itself and will require some experimenting and "tweaking". In fact, you'll probably want to come up with one of your own; these are just suggestions.

This method leads to another problem: what

Continued on pg. 17


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about hexes that several units (perhaps from both sides) can move to? What value goes there? As before, there are several solutions. The simplest: the sum of all the values to be placed there. Another might be the sum of the largest positive and the largest negative values. Again, you'll need to experiment to see what works best.

COMBAT STRENGTH

Given two units of equal movement ability, the one with greater combat strength (CS) exerts more influence over the same area. How do you show this? Easy: make the arbitrary value used some function of the CS. For example, we could just use the CS itself as the arbitrary value. However, the CS probably won't be large enough to get the differentiation that we want. In that case, we can multiply it by some constant (say, 10) or raise it to some power (say, 2), or both. If we wanted to get really tricky, we could multiply it by a varying amount, such as the number of friendly units within a certain distance. As before, you need to experiment to see what works best with your game.

ATTACK RANGE

Given two units of equal movement ability and equal combat strength, the one that has a greater attack range (AR) exerts more influence, since it can affect a greater area. For each hex to which a unit can move, there is a surrounding group of hexes into which that unit can fire. These can include hexes both within and outside of the unit's movement range.

Some questions arise when taking attack range into account. What value should we place in all the hexes that a unit can fire at from a given position? Probably the adjusted CS value that we are placing in the position itself. What should we place in a hex that a unit can both move into and fire at? Perhaps the greater of the two values that would be given to the hex. What about hexes that several units, possibly from both sides, can move and/or fire into? The answer to this question is left as an exercise for the reader.

TERRAIN FACTORS

Given two identical units, the one that is least hampered by surrounding terrain exerts more influence. This can happen in several ways. First, terrain can limit movement. Second, terrain can affect combat strength, either directly (by lowering actual combat strength) or indirectly (by increasing defensive strength of enemy units). Third, terrain can reduce attack range by blocking line-of-sight (LOS) attacks.

Dealing with terrain factors becomes very messy very quickly. Consider the problem of determining all the hexes to which a unit can move. Suppose that the unit has a movement factor of 5. If we ignore terrain, then we simply look at all locations 5 or less hexes from the unit's current position. We can do that easily. Now let's add terrain. The result? We must try to trace a path to each of those 90 hexes, taking into account the cost of moving into each hex along the way. There are some well-defined algorithms for doing this, but they're going to take extra time and memory. And the terrain effects on combat strength and attack range can be even harder to handle.

CONCLUSIONS

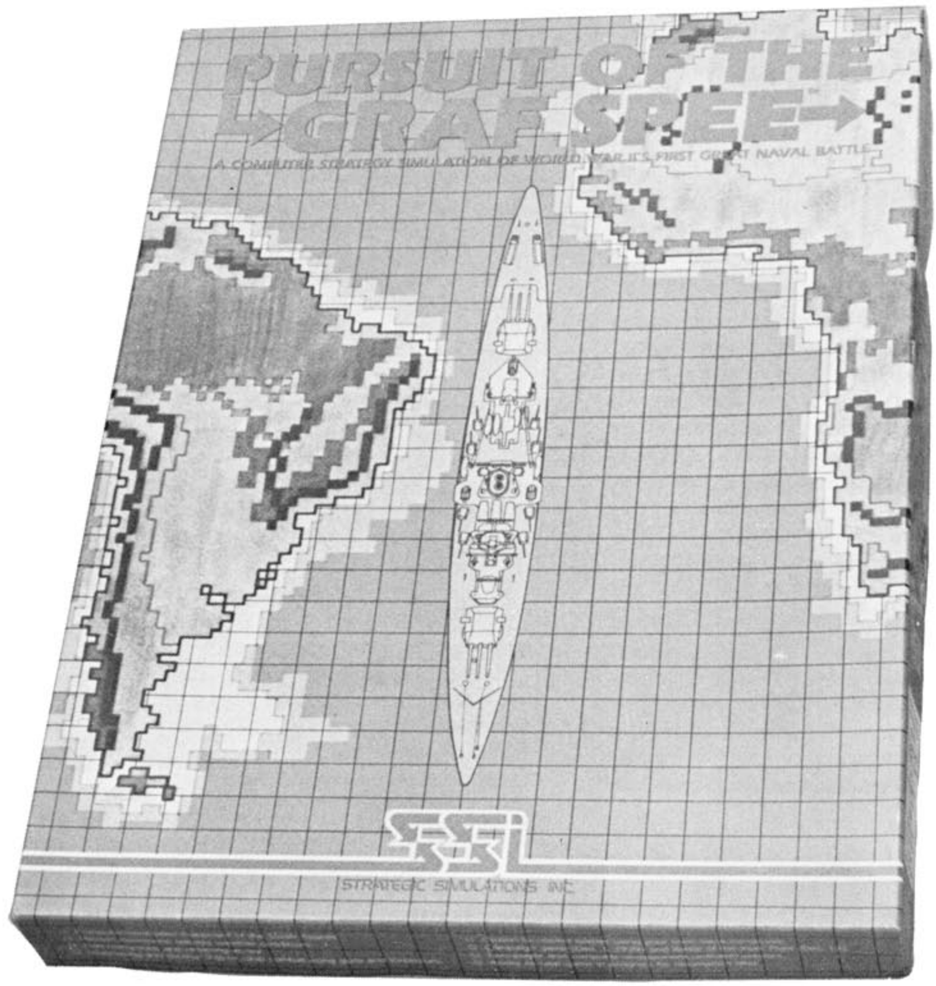
We can make a game-playing program complicated without much effort. If we really try, we can make it very complicated. Unfortunately, the improved performance doesn't always justify the increased time and memory consumption.

In the next few issues, I'll have examples of the techniques described above, as well as some of the algorithms needed to carry them out. As always, I'm happy to hear from you, especially anyone who would like to submit a column for Silicon Cerebrum. You can reach me at:

Bruce F. Webster
9264 Grossmont Blvd.
La Mesa, CA 92041.

PURSUIT OF THE GRAF SPEE: A Review

by William Edmunds



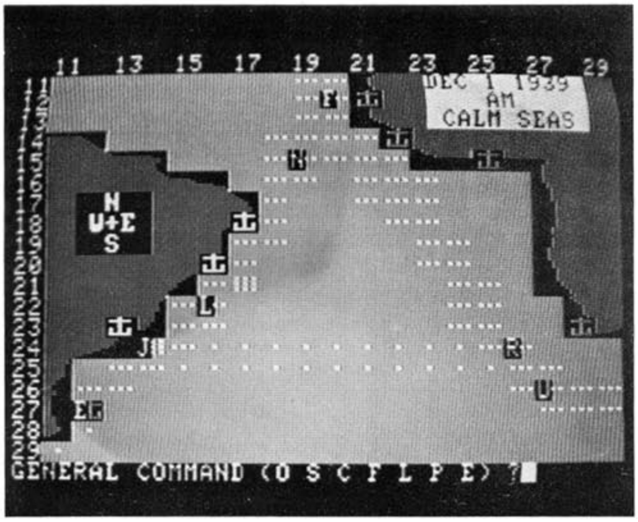
BASIC INFORMATION

NAME:	Pursuit of the Graf Spee
TYPE:	War Game
SYSTEM:	Apple II w/ ROM Card or Apple II Plus
FORMAT:	Disk
# PLAYERS:	1 or 2
AUTHOR:	Joel Billings
PRICE:	$59.95
PUBLISHER:	Strategic Simulations Inc. 465 Fairchild Drive, Suite 108 Mountain View, CA 94043 (415) 964-1353

PURSUIT OF THE GRAF SPEE is a war game based on one of the early conflicts of World War II. The Graf Spee, one of Germany's new pocket battleships, was sent to the South Atlantic to sink Britain's supply ships. In this game, twelve Allied ships must find and sink the Graf Spee as it moves about sinking merchant ships. The game can be played by two players or solitaire, with the computer playing the German side. A complete game can take two hours. Games can be saved after each turn but require a separate SSI initalized diskette.

The game is played on a map of the South Atlantic which is displayed on the Hi-Res screen. The ocean is sectioned by a grid upon which ship positions are displayed by identification letters. There are ports on the coast of Africa and South America which can be used for refueling and repairs.

The game starts on December 1, 1939 and ends on December 25 or sooner if the Graf Spee is sunk. There are two turns per day and you can move your ships one space in any direction each turn. Inputing moves is very simple and you can go back and change any or all ship moves as often as



you like. If you choose not to move a ship, it will patrol its location. You can refuel by moving into a port and patroling for one turn.

If the Graf Spee is in the same location as one of the Allied ships then there is a possibility it will be sighted. That chance is based on weather conditions and the number of ships at that location.

Once the Graf Spee is spotted, the game moves to a tactical combat phase where each turn represents about three minutes. This phase is much more detailed and takes place on a featureless background with the letter designations representing relative position of the ships involved. Here you can control speed, heading, and targets for your guns. The ships are rated for speed, type, and placement of guns, and armor thickness. Combat continues until all enemy ships are sunk or visual contact is lost.

The main portion of the game is finding the Graf Spee. You must deploy your ships to search the areas where the Graf Spee is likely to show. Normally you won't know where the ship is unless a merchant ship is sunk. Then there is a fifty percent chance the merchant vessel will radio its location.

The Allied ships you have for searching are comprised of one battleship, four heavy cruisers, five light cruisers or destroyers, and two aircraft carriers. The carriers improve your chance of finding the Graf Spee, because of their reconnaissance aircraft, and they can launch one air attack with their torpedo bombers. However, they have no armament and require an escort to prevent being sunk. The Graf Spee has larger guns and more armor than the cruisers, so unless you are attacking with the battleship Renown, you will need more than one or two ships in a single location.

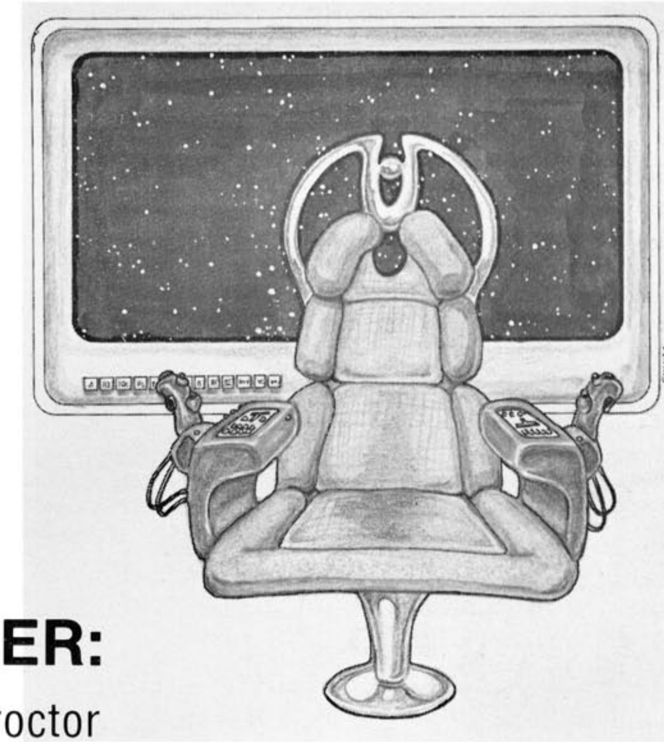
Even with occasional reports of the Graf Spee's location, finding him is a challenge. Ships that are patrolling have a better chance of spotting than when moving into a location. By patrolling in small clusters off the main shipping lanes, you should improve your chances of locating the Spee either by sightings or radio distress reports. There is a short version of the game that starts on December 13 with the Exeter, Ajax, and Achilles sighting the Graf Spee as it leaves the Plate River area. But starting the game with three cruisers sighting the Spee is no easy victory, as you will see.

When the Graf Spee is spotted, the game moves to a naval battle. The author has done a good job of simplifying many aspects of the real world while maintaining those which give you tactical control over your ships. The player input is simple and the resolution of a turn is quick. All the ships are rated for maximum speed, size of guns and their placement, armor thickness, strength of the hull and superstructure, and torpedoes. There is a chart which gives maximum range at which the shells will penetrate the different thicknesses of armor. This makes for a nice tactical game within the main strategic game.

Battles are initially set up with the Graf Spee directly ahead at a range which is dependent upon weather conditions. The Graf Spee will be running from the encounter while firing its stern guns at you. Your ships all have more speed and can overtake the Spee, but except for the Renown, your guns are smaller and cannot penetrate the Spee's armor at long range. If you start your pursuit from a long range, your ships, one by one, will succumb to the Spee's larger guns.

The December 13th scenario is a perfect example of this. The game starts with clear skies which places you at long range. In this case, I find it is better to break off the attack and try shadowing the Spee. According to the formula given in the manual, with clear skies and three ships you have a better than eighty percent chance of successfully shadowing. Then on the next turn, if the weather is bad and you manage to keep track of the Spee, you will be able to launch your attack from a shorter range. You most likely will lose a ship or two but a torpedo hit will slow the Spee down. Then you will be able to finish her off with your remaining ship as the hits come in a fury due to the targets reduced speed, your closing range, and the smaller guns' increased fire rate. Of course, if you lose track of the Spee, then it's back to square one.

The PURSUIT OF THE GRAF SPEE is a good intermediate level war game. It combines a strategic game, its anguish of unsuccessful searching, with tactical battles which can produce the thrill of battle when you're finally closing in for the kill. This game characterizes many of the aspects of naval combat while being fast paced and easy to play. ■



STARSHIP COMMANDER: A REVIEW

by Bob Proctor

BASIC INFORMATION

NAME:	Starship Commander
TYPE:	Strategy
SYSTEM:	Apple II or Apple II+ (48K, requires paddle)
FORMAT:	Diskette (DOS 3.3)
# PLAYERS:	1
AUTHOR:	Gilman Louie
PRICE:	$39.95
PUBLISHER:	Voyager Software P.O. Box 15-518 San Francisco, CA 94114

Is there anyone with an interest in computer gaming who has never played **STARTREK?** You know, where you dash from quadrant to quadrant, destroying Klingons wherever you find them? The game has been around for over a decade (!) and there are countless versions, including the more glamorous offspring such as Atari's **STAR RAIDERS.** For those who are familiar with it (and I assume that means almost everybody), the most important thing I have to say about STARSHIP COMMANDER is that it is NOT another souped-up version of **STARTREK.**

Instead, SC depicts a single battle with 1 to 3 enemy ships (the baddies are called Vegans here). To win, you must destroy them, force their surrender, or force them to run away. As commander of the USS Ranger, you must not only give orders about navigation and weapons, but must make decisions about how to allocate energy, when to rest weary crew members, and when and where to use your repair droids. The game is packed with detail but unfortunately the documentation doesn't give you an over-view of what's happening. For this reason, many may find that SC is not worth the effort required to master it; but Trekkies will love its ability to make you feel --more than any other game -- like you're in the Captain's chair of a Federation starship.

TAKING OFF

The first thing that strikes you when you start playing is the way the paddle is used to control all game functions. Almost every screen contains a list of choices. By rotating the paddle knob, you move an arrow to the item you want and push the paddle button to select it. You NEVER have to touch the keyboard! While I think this is an excellent approach, I would still like to have an option to use the keyboard in emergencies. For example, the knob on my old set of Apple paddles would not turn far enough to let me select the last item on each list. Unfortunately, this was usually "RETURN" and I was stuck--unable to continue the game. Some of the better paddles have an adjustment screw to correct this, but I don't know what to tell you if your pair is non-adjustable. Perhaps you can devise a test to see if your paddle (0) has a full range of settings. Of 3 pairs I've tested, only mine had this problem, so maybe it is not too common. On the other hand, you would not want to buy this game and discover that you couldn't play it.

GIVING ORDERS

The list which you will use the most is called the Command Screen. From it, you can select any of 7 stations of the Ranger:

Communication	— to talk to the Vegan commander.
Defense	— to maintain your shields.
Engineering	— to allocate repair droids and power.
Life Support	— to change crew or team assignments.
Navigation	— to control the ship's speed and course.
Science	— to "scan" an enemy vessel's status.
Weapons	— to fire positrons or torpedoes.

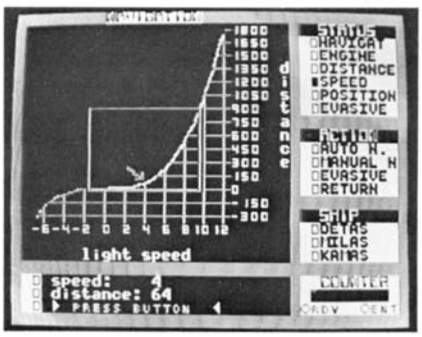
Each time you return to the Command Screen, there is an asterisk in front of the stations which you have selected so far that turn. This keeps you from overlooking an important function (like Weapons!) which is an aggravating mistake. It's a great touch which makes you feel like the computer, for once, is on your side.

Besides these stations, there are 2 other choices on the Command

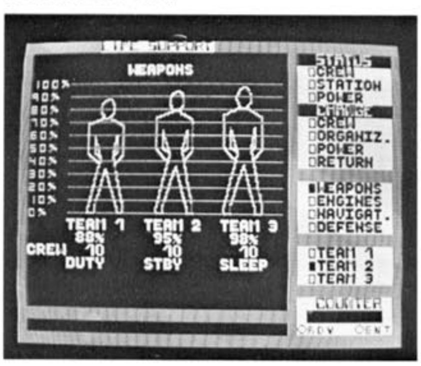
Screen. The first ends the game (with an option to save it and continue later) and the other ends the turn. When the turn ends, you see the exchange of weaponry on a scanner screen, get a report of damage, injuries and fatalities, and see the relative movement of the ships on a screen called the "Motion Detector." Then you're back to the Command Screen and it's time to plan your next move.

GETTING THE PICTURE

There is a lot of information available from your shipboard computers. There are about 30 different screens which convey the status of your ship and as many others which allow you to perform some action.



The graphics used to display information are superb. There are bar charts to compare actual power usage with allocated power, a graph to give you the relationship between speed and distance covered, schematics of the Ranger to show damage, and plan views showing the relative position of all ships. If a business program had these graphics and ease-of-use, people would rave about it. It's very nice to see them in a game; certainly the need to easily understand a lot of information exists here too.



As good as the graphics are, there is so much information that it is not clear at first what is important and what is "chrome." This is a mixed blessing as it adds mystique which makes role-playing more fun, but it makes it harder to figure out a winning strategy. I expected to find a description of what's going on in the 19-page book that comes with the game. It's not there and I consider this ommission SC's biggest failing. This is a very complex simulation and a Commander should understand it, not be learning it on the job. Take Power, for example. It is obviously being used up -- the rules tell you how much is needed for some (but not all) functions. However, nowhere are you told that the engines are also generating power or that this amount depends on the efficiency of the team on duty in Engineering. It is possible, if you are frugal, to generate more power than you use and thus replenish the batteries a little. In a battle where both sides are severely crippled, this tactic may be the game-winner; the extra energy might allow you to repair your torpedoes first. The point is that such subtleties are not obvious (at first) and are not explained -- you have to be willing to dig for them.

DELEGATING AUTHORITY

In the beginning it seems like there are too many decisions to make; so it is nice that you can give the computer some of your decision-making burden. Both the Defense and Navigation stations have Automatic Control options -- with these in effect, you only have to worry about Weapons each turn and Life Support every 4 turns or so. With defensive auto-control, the computer will distribute power to your shields, keeping most of it in the shields that are facing the enemy. In Navigation, you can choose semi-automatic, where the computer sets the course but you control speed, or full automatic, where you select a distance and the computer will attempt to keep the *RANGER* that far from the enemy.

It is necessary to go to Life Support to rotate the crew teams from Duty to Sleep to Standby. There ought to be a way to give orders to have them rotate automatically but there isn't. There are, to my way of thinking, several such features which *should* exist but don't. For instance, there isn't any report that shows you the power allocations for ALL of the main systems. Each total is available on the appropriate report but I would expect an overview to be available at Engineering. It isn't -- anywhere. It's also very hard to get a clear picture of power consumption. The amount left in the batteries will give you an idea of how much you're using but there is no report to show you clearly where it's all going.

Another item I miss is a plot of the enemy's projected position. This is the point where the Vegan ship(s) would be at the end of the next turn at their present course and speed. The auto-pilots can use this projection, but there is no way to display it if you want to do your own navigation. The automatic controls, both in Defense and Navigation, do an adequate job for a novice but will not do as good a job as an experienced Commander. If you are going to be good at SC, you must eventually take up these duties yourself. It would also be nice if there was some indication of ship heading on the Motion Detector. This would let you see which shield was facing the enemy, a crucial factor.

GETTING PROMOTED

At the end of the game you get a score and a rank based on your performance. Under 8000 points earns you the rank of Crewperson, higher scores earn one of 11 higher ranks -- all the way up to Fleet Admiral for more than 38,000 points. The number of points you get will depend on several factors but is primarily a function of how many Vegan ships you faced and how strong they were. You can choose to fight 1, 2, or 3 at the beginning of the game and select the type (Destroyer, Cruiser or Dreadnought) of each. At first, you'll have your hands full with a single Destroyer but as you learn, you can increase the challenge by selecting a stronger force. You also get an 8000 point bonus if you can get the Vegans to surrender. You demand this using the Communication station. The Vegan commander has no sense of humor at all.

CONCLUSIONS

STARSHIP COMMANDER puts YOU in charge. The level of detail is extraordinary; you know each crewmember by name and control every aspect of your ship's operation. In a game lasting from one to four hours, you, like **STAR TREK'S** Captain Kirk, will not only have to know good battle-tactics but will have to manage your ship well enough to maintain fighting efficiency equal to the enemy's. The documentation is weak; it explains the commands and options but does not provide an insight into what is happening. This can only be gained by playing. [Ed. Note: Please see the designer's notes for *Starship Commander* in our next Issue]. For those who are willing to dig for this understanding, the game offers considerable challenge and satisfaction. ■

ADVENTURES - Cheaper By The Dozen And A Half

by Dick Mcgrath

BASIC INFORMATION

NAME:	The Captain 80 Book of Basic Adventures
GENERAL CONTENT:	Program design and basic language coding technique applied to adventure-type programs
SPECIAL FEATURES:	1. A newly-released adventure program generator which creates adventure programs in basic. 2. Complete program listings in basic for eighteen popular adventures
AUTHOR:	Robert Liddil
PRICE:	$19.95
PUBLISHER:	80-Northwest Publishing, Inc. 3838 South Warner St. Tacoma, Washington 98409

In addition to software on tape and disk, there are armloads of books with program listings which you can type in yourself. CAPTAIN 80's BOOK OF BASIC ADVENTURES is one such volume... and a source of hours of exciting challenge for the computer adventurer.

"Captain 80" is the pseudonym of author Bob Liddil, who writes a column of the same name for the *80-U.S. Journal,* a national magazine devoted solely to the TRS-80 computer.

The book opens with a forward by that guru of computer adventures, Scott Adams, president of Adventure International. As a pioneer of the computer software industry, his comments provide a stamp of approval. He describes the book as "the world's first anthology of basic adventurers from some of the best known writers of micro-computer software".

The first seven chapters are brief (2 or 3 page) monographs, possibly the substance of past or future *Captain 80* columns. The first two chapters provide a bit of philosophical history on the role of the adventurer in literature, and draw an interesting comparison between the adventure hero of the past and his modern counterpart, the computer adventurer. The remaining monographs offer brief suggestions on how to play, design, write and market computer adventures. Don't expect the "complete adventure gamers manual", however. Remember, each chapter is only two or three pages long.

Chapter 7 is particularly valuable to the sight-unseen mail order purchaser of computer adventures... in fact, this chapter alone could be worth the price of the book! It contains capsule descriptions of 27 popular, commercially available adventure programs. A little research could prevent you from wasting money on a program that doesn't appeal to your particular interests.

But the real value bonanzas in this book are the adventures! Of the 252 pages, 215 are devoted to the program listings of eighteen basic language adventures. If you consider that each one retails separately for about $15.95, you could sell out a total of about $287.00 for this collection on disk or tape! You're getting them for about $1.10 each in the book. Now that's value!

All the programs are written for the Model I TRS-80 but should be easily convertible to other machines and other versions of basic. All but one should run in 16K of memory, although you may need to remove the remarks statements and compact some of the code to fit.

All have been published previously and most are still commercially available. The authors are some of the best in the business: Scott Adams, Lance Micklus, Teri Li, Greg Hassett, Don and Freda Boner, and others. These adventures represent a cross-section of some of their early efforts. Though their current work is undoubtedly more sophisticated, you can hardly complain when you're getting these at about $1.10 each. All are still great fun, and a few have become classics.

Let me give you a sampling: One of Scott Adams' first efforts, *Adventureland,* was written when all you could find were *Star Trek* imitations. It has a sleeping dragon (tread lightly), a swamp, a lava flow and Paul Bunyon's magic axe. This is the original version, written in basic. Though it was later rewritten in machine language, this is still an excellent introductory adventure for the novice.

Greg Hassett, the teenage founder of his own mail order software business, *Adventure World,* is also a prolific computer adventure writer. Five of his early efforts are included in *Captain 80.* "Journey To The Center Of The Earth" -- designed by a beginner, for beginners; "House Of The Seven Gables"; the claustrophobic "King Tut's Tomb"; Voyage To Atlantis" and the sinister "Sorcerer's Castle". Collectively, they trace his developing talents as a computer adventure writer.

Lance Micklus is well known as a business and utility program writer. His only currently available adventure program, "Dog Star Adventure" is included as the single space age theme in the book.

A father-daughter programming team from Indianapolis, Don and Freda Boner, have contributed a tale of Kentucky Moonshine, revenooers, good old boys and southern sheriffs in *Thunder Road.* They also wrote the most recent of the programs, a two part series: *Revenge Of The Balrog* and *The Fortress At Times End,* fun for dungeon and dragon fans!

For those of you who like "Big" adventure, Teri Li's *Atlantean Odyssey,* is a full 48K in length. Not only is it the largest program, it comes complete with simple graphics of the adventure locations. Teri, a professional programmer for Instant Software, has two other programs in the book -- *Lost Dutchman's Gold* and *Spider Mountain.*

If you've read this far, you probably know what is meant by a "Computer Adventure". But just in case you don't, let me give you a definition straight from Captain 80's book; A computer adventure is... "A semi-intelligent, word recognizing computer program which employs a novelistic style to present an unsolved puzzle." It is a word oriented game in which the player communicates with the game author through the computer. The writer has thrown out a challenge to the player, in the form of a puzzle. The author's success is measured not so much by whether you are able to solve the puzzle, but by the amount of fun you have in trying.

Continued on pg. 39

HORSE RACING CLASSIC: A REVIEW

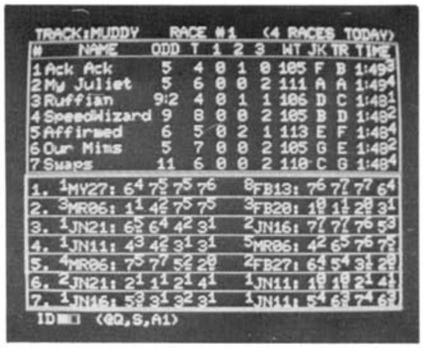
by Barry Austin

NAME:	Horse Racing Classic
TYPE:	Sports Game
SYSTEM:	Apple II
FORMAT:	Disk
# PLAYERS:	1 to 9
PRICE:	$36.95
PUBLISHER:	Taaumi Software International 8 North Grosvenor Ave. Burnaby, British Columbia Canada, V5B 1J2 (604) 294-2891

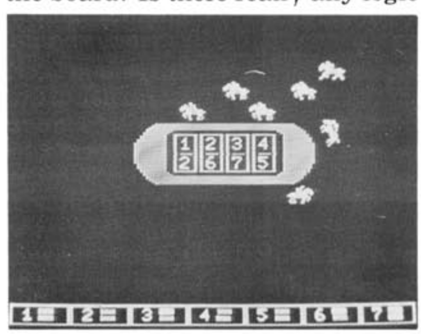
[In Howard Cosell's voice] -- *It's a simulation. A pedagogic device without parallel in the annals of digitized sports games. An electronic derby party which fetes more equine excitement than my own loquacious platitudes and perambulations in covering the May Classic (the Kentucky Derby for the uninitiated) in my own nasal and lugubrious fashion.*

Thank you Howard for that nifty introduction to HORSE RACING CLASSIC. Yes, we agree with you, HRC is a good horse racing simulation, a good teaching tool, and just a darn good party game. There have been several horse race games written for the Apple (most were little more than lo-res programming exercises), but HRC stands apart.

As a simulation, HRC makes use of a horse's track record to determine the potential performance of each horse on the daily card. For example, a horse that has a record of coming from off the pace (according to the racing form provided for each race) will have a good chance of closing on the leaders in any given race. Anyone who knows how to read a racing form will feel very comfortable with HRC, as the two most recent performances of each horse in a race are given for your examination. In addition to the recent racing history of each horse and standard racing form data (weight carried, Odds, fastest time, number of starts, wins, places, and shows), HRC gives a rating to the jockey and trainer assigned to each horse. All of which adds an amazing degree of realism to the game.



As a tutorial, HRC can be used to teach a novice not only how to read the racing form, but how to make intelligent choices at the betting window. When is it best to bet across the board? Is there really any logic to "Place" bet? How did I lose my money so easily? The appendix to the rulebook has a nice little discussion on understanding odds and pay-offs.



While HRC performs admirably as a simulation and tutorial on throughbred wagering it really shines as a party game. With HRC at a party, don't be surprised if you find a room full of otherwise normal people jumping up and down screaming for "Spectacular Bid" (or even "Spectacular Dud") to race across those last few grueling inches of the monitor for a well earned victory. As we have just hinted, you can change the name of any of the 100 horses stored on the game disk. This will not change the horses performance record (which is stored by date and race), but can provide a humorous touch to the proceedings. Each bettor is given an initial stake of $100 which he or she uses to try and win the most money. The game stores the ten highest winning totals on disk. This "Handicapper Hall Of Fame" adds an additional touch to the game, evidenced by a recent incident in which a player refused to bet on the last 4 races of the daily card because he had a $1 lead over the all-time third place total.

From one to nine bettors can buy the traditional win, place, and show tickets for any of seven horses in the four to nine races of the daily card race. Bettors can also buy tickets in any combinations such as betting a horse "across the board". This hi-res game is very well done and well worth the $36.95 price tag. ■

SNEAK ATTACK ON KNIGHT OF DIAMONDS

By Harry Conover

The chevroned boys, fresh from a 30 day leave after whipping Werdna in Woodhead/Greenberg's first **WIZARDRY** scenario, **PROVING GROUNDS OF THE MAD OVERLORD,** were ready to join forces again. This time their task was even more difficult. Find the five items on Gnilda and return them, along with the staff of light, to her highness so that she might regain her throne.

They had been warned by previous mercenaries that the maze was guarded by monsters of incredible strength and that even level 13 veterans had fallen victim to it's many entrapments. But expedition leader Prospero knew his men. Stormtroppers Kirk and Frenchy along with Akido the Samurai, would lead with Lord Prospero, Damien and Lechat in the rear, casting spells and giving aid when needed.

After stocking up with armament and supplies and a blessing from the nether worlds, Stoned Sammy (lost forever !!) the group made their way into level one.

"Not as bad as I thought", cracked Kirk, reaching the middle chamber and receiving instructions from Gnilda.

"At least there are no creeping coins", muttered Frenchy.

"Patience, men, patience, our test is about to begin" counseled Prospero.

And that is why, it took these well seasoned men hours to find the only way into level two and hours more to map that 80% darkened maze.

"I could be home playing Zork", grumbled Akido.

"We all will be if you don't start getting in the first hit", suggested Damien.

"Let us camp now", said Prospero, "and decide on our strategy. Our food runs as low as our spirits so we must devise a plan of expediency." Around the crackling fire the 6 tossed ideas back and forth. They kept coming back to Kirk's idea and finally agreed on it. They would cast a Malor spell down to the 5th level and work their way back up the stairs, thereby coming up on any evil-doers or traps from behind. There was only one hitch.

"What happens if we travel into solid rock?", asked Akido?

"Well then", laughed Kirk, "it's time to call in our second generation. Thank Woodhead for backups".

Using the time honored method of coordinate selection (10,10) the six were wisked off into....

"Mon Dieu!", hollered Frenchy. "We have landed right in the middle of level five. No rock, no traps no..." Frenchy's enthusiasm was quickly abated by a horde of monsters that dispatched Damien and Lechat to the other side. Using Prospero's magical recuperative powers (and three and a half sets of crossed fingers), Damien and Lechat were summoned back from the dead.

"You men have got to remember, these monsters aren't foolish. They grew up in the same environment we did so they know all our spells. Forget about that dilto stuff, Damien and Lechat just open the chests please!" thundered an exhausted Prospero. Heeding their mentor's advice the six pushed on, hacking and slaying their way through levels 5, 4 and 3.

"Hey Kirk", yelled Akido during a melee against harmless puffballs, "I think your planned worked!".

"Yeh, sure looks that way", smiled the stormtropper, "we've got three of the five items and avoided some nasty traps. All in all this is a breeze".

Fighting on with their quest nearly over, the gallant men realized the 2nd level and claimed all five items that made up the Knight of Diamonds. "And now", intoned Prospero, "for the real test, we must journey back to the 5th level for the Staff of Light for without it our task is incomplete."

Using the Malor spell and overcoming a gauntlet of the deadliest defenders ever seen in a maze the prized staff was re-claimed and the heroes given their due.

Back in the luxury rooms at the inn the now be-knighted squad pondered their next adventure. "All I hear about is Time Zone, Time Zone", mused Damien," maybe we should look into this."

"Ah, Mesopotomia in the spring", sighed Prospero.

"Guess I know where to send my bags now", chuckled Kirk.

Time Zone, you haven't got a chance. ■



We're being overrun with bugs. Animated Ants are after the sugar in the kitchen. Busy Bezzing Bees are outside by the patio ruining picnics. And Springy Spiders are cluttering up the garage.



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ATARI ARCADE

by Bill Willett

If you're an Atari gamer like me, you've probably visited all the software stores within a thirty mile radius to find that special combination of software and people that can help you find what you want. Or, you buy countless magazines and read the reviews to help you spend your limited software dollars. Right now, Atari game software is just beginning to become abundant. We gamers need two things to make us happy. We need more games, and ways to choose what fits our needs.

To get more games, you need more programmers. To convince these programmers to spend their limited time on the Atari there must be sufficient payback for the time invested. The Atari has inherent capabilities to make a game programmer's time more efficient. But more important, the number of Atari users is growing into a substantial market. The lack of software and the potential sales is drawing programmers to the new Atari market.

The special capabilities I'm talking about are the features built into the hardware to make the game programmer's life so much easier. The beginner, like me, can now do wonderful things like scroll across maps or fly needlefighters through defender type worlds. These capabilities are even more important to the professional programmer. The time he saves in developing graphics can be used in fine tuning and developing more games.

I'll give some examples of how the Atari has made my life easier as a game programmer. I'm working on a war game right now that I could not have undertaken with any other machine on the market. I've incorporated a four screen map (similar to Eastern Front's six screen map) in basic. To scroll across this map on another machine I would have had to use complex machine code routines to actually move the map through the display memory. With the Atari, this scrolling is done by calling a fifteen byte machine code user routine which has to change only a few memory locations. Yes, I had to learn some assembly language, but not like I would have on an Apple or Color Computer.

To have created this map (40 wide by 24 deep) on another computer with graphic blocks would have required some 15 thousand bytes. The same resolution on the Atari can be done using a redefined character set with only one thousand bytes. This is done by redefining the alphabet as pieces (trees, forests, tanks, etc.) and printing them on the screen just like text. The 8 by 8 matrix of graphics blocks defining the piece can be specified with only one byte.

A final example is the gamers Godsend, the player missile. In my game, to move a piece without players would mean moving the image of the piece through the map, restoring the map as I went. With players, the map is left intact and I move a player around on the screen. The computer takes care of who's on top of who and moves the piece without disturbing the map.

While there are advantages to programming your game on an Atari, there are also some negatives. One is the limited market at this time for their efforts. Another problem is the lack of good utilities. We're now seeing the second generation of utilities which should provide better tools for the programmer. Another problem I've heard of is the slowness of chaining programs.

NEW RELEASES

Protector, *Chicken*, and *Dodge Racer* are three designs for the Atari from Synapse Software. *Protector* seems to be very popular and with good reason, it uses all the Atari's features. See notes on the game in the Jan.—Feb. and May-June issues of CGW. *Dodge Racer* is the old standby where the player guides his car around a number of concentric tracks that can be switched between. The player attempts to clear the tracks of dots while not being hit by the oncoming computer car. *Chicken* captivated me. Although a simple concept of a chicken catching falling eggs dropped by the cagey fox at the top of the screen, the playability is excellent. The detail is superb. The fox's feet move and he sits down when done. The chicken flaps her wings and shuffles her feet. The chicks (the result of a dropped egg) peep and bustle realistically. Best of all I like the little man who boots the chicken off the screen (the result of stepping on a chick). Synapse seems to be producing good games.

Datasoft's *Tumblebugs* is like the Apple *Dungbeatle*. You are pursued in a large maze by a number of tumblebugs. You must eat all the dots before the tumblebugs get you. The unique thing in this game is the magnifying glass window which moves above the maze (which is too large to see detail) and magnifies what is below it. Gamma Software's *Hockey* is a delight to play. This two, three or four person game has three players and one goalie per side and is quite similar to Intellivision's soccer.

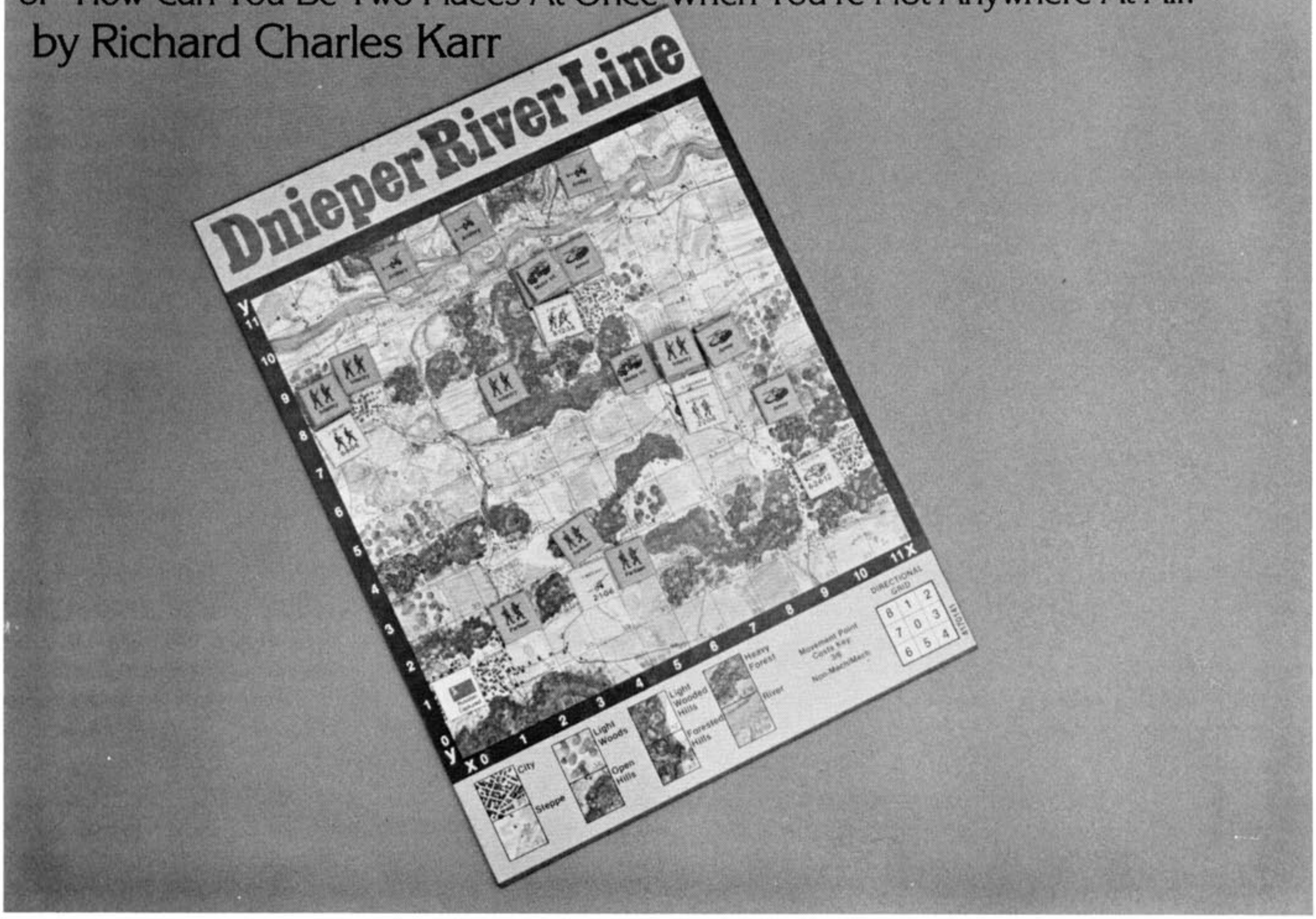
SSI has released *Tigers In The Snow* and *The Battle of Shiloh* in Atari versions. Both require the BASIC cartridge, and either disk or tape, and cost $40. All versions require 40K except tape Shiloh which uses 32K. Both have scrolling maps *The Battle of Shiloh* recreates the famous American Civil War battle, while *Tigers in the Snow* simulates the December 1944 offensive by the Germans. You can find reviews on these two games for the Apple in back issues of CGW, Mar.—Apr. for *Tigers* and Jan.—Feb. for *Shiloh*.

EPYX has announced four adventure games to delight we Atarians. *King Arthur's Court* sends the player off fighting dragons and wizards in order to return the crown. *Nightmare* puts you in a magical castle with gargoyles, headless men and, packs of very hungry rats, all tempting to stop you from retaining your sanity. When shipwrecked on *Vulcan's Isle* you'll battle demons and satyrs to earn freedom. In *Crypt of the Undead* you are in a cemetery and must find your way to the world of the living before dawn. Although I haven't seen these games yet, that they all require joysticks is a good sign. ■

DNIEPER RIVER LINE

or "How Can You Be Two Places At Once When You're Not Anywhere At All?"

by Richard Charles Karr



BASIC INFORMATION

NAME:	Dnieper River Line
TYPE:	Wargame
SYSTEM:	Apple, Atari, Pet, TRS-80
FORMAT:	Disk or Tape
# PLAYERS:	1
AUTHOR:	Bruce A. Ketchledge
PRICE:	$20.00 (tape); $25.00 (disk)
PUBLISHER:	Avalon Hill Game Company

The desperate position of German defensive strategy on the Eastern Front in 1943-44 was partially solved with the use of mobile Kampfgruppen (battlegroups) as fire-brigades, scrambling desperately between emergencies with never enough resources, keeping disaster at arm's length until the numbers finally caught up with the German Army. **DNIEPER RIVER LINE,** a recent release by Avalon Hill, accurately simulates the problems (and frustrations) of a hypothetical sector commander in the German Army who sees the writing on the wall.

Some old ideas are re-worked here: fog-of-war (inadequate or inaccurate information); and inadequate resources desperately trying to do too much with too little for too long. The result is a series of scenarios guaranted to earn the player (metaphorically speaking) his service decoration, combat fatigue, and transfer to a quiet sector (like Normandy).

The physical components are typical of Avalon Hill's board games: multi-colored mounted mapboard; die-cut counters; 16-page narrative-based rules booklet, and thick 1" box. As the program features text only (which must be interfaced with the mapboard and counters), pirating is rendered impractical. A pirated version would resemble the graphics state-of-the-art in wargaming of early 1971, with "paste-your-own" counters in the format of early zip-lock.

The Game System

Dnieper River Line is 8-12 turns long, with each

game-turn representing one hour of "real" time. Each turn is subdivided into five phases: Russian Movement; Russian Combat; German Movement; German Combat; and Reinforcements. A save-game option exists at the conclusion of each game-turn.

The Russian movement phase is exclusively computer-controlled, with passive interaction necessary for the German player to keep track of Russian activity and intentions. An average computer turn takes 2-4 minutes. The usefulness (completness) of information available to the German player is directly related to how well his units can "see" what's going on. Russian units move toward fixed objectives (there are six) until they capture objectives, encounter German units, run out of movement points, or are disrupted by German fire.

The combat phases incorporate an algorithm which includes severity of fighting, disruption levels, smoke, anti-tank capabilities, percentage strengths, and combat modes. The computer displays combat odds as a ratio and immediately resolves the combat, with defeated forces retreating up; to squares toward their side's baseline.

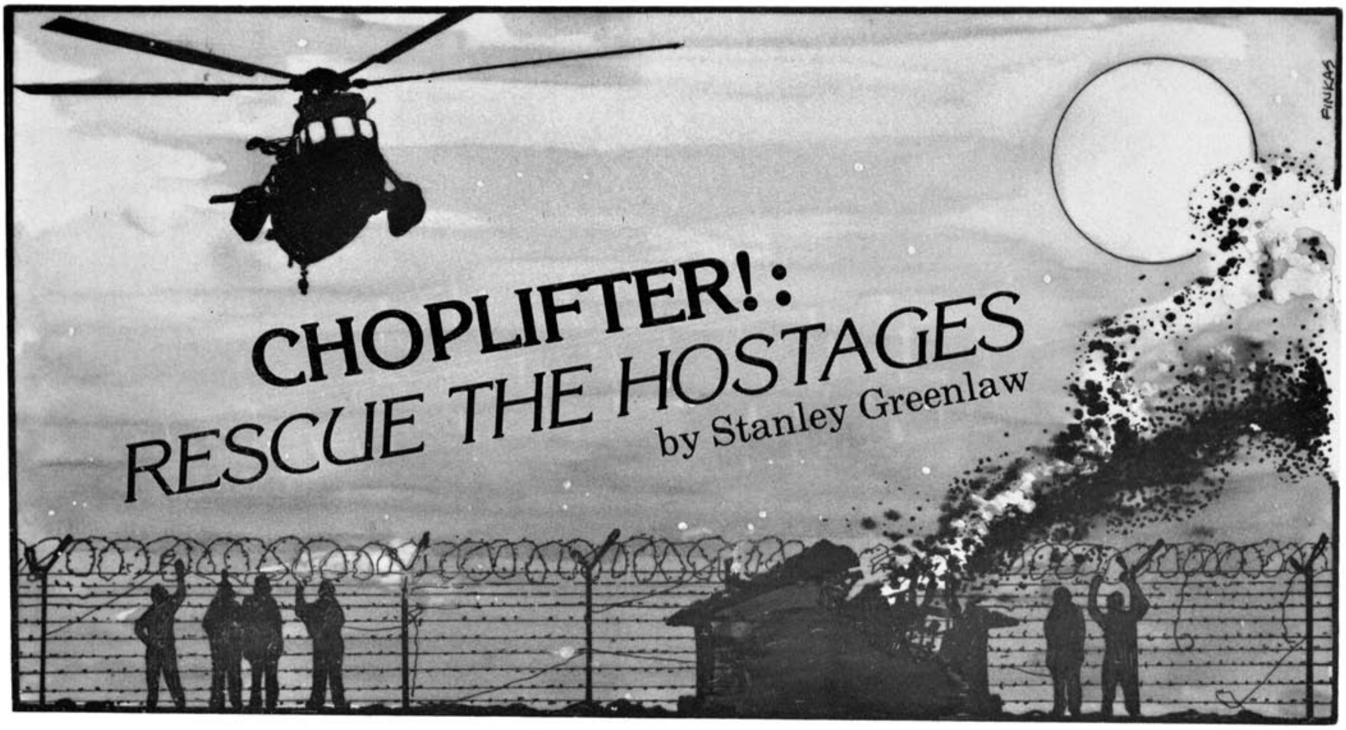
The German movement phase presents strategic choices for the player: *command* (to change the status and move an individual unit); *status* (to check the condition of all German units); *reserve* (to request the release as reinforcements of off-map units); *artillery* (to request off-map artillery support); *objective* (to review the ownership of the objective squares); and *quit* (to end the German combat phase).

In the command sub-phase of the German movement phase, units can be deployed in one of three combat modes: *static* (no movement allowed, limited observation, and defensive strength is doubled); *assault mode* (normal movement, combat, and observation); and *mobile mode* (doubled movement allowance, normal observation, and combat strength reduced by one-half).

Disruption levels (displayed during the status sub-phase of the German movement phase) have a devastating effect on the combat capabilities of units, with an adjusted combat strength equal to 1/1(+x), where x=disruption level. Disrupted units that aren't moved or attacked, or don't participate in an attack can recuperate in disruption levels.

Each unit has a displayed number, type, strength, location, mode, and status displayed during the status sub-phase of the German movement phase. A check also exists to easily see whether or not a unit has been moved. Combat, movement, and

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CHOPLIFTER!: RESCUE THE HOSTAGES

by Stanley Greenlaw

BASIC INFORMATION

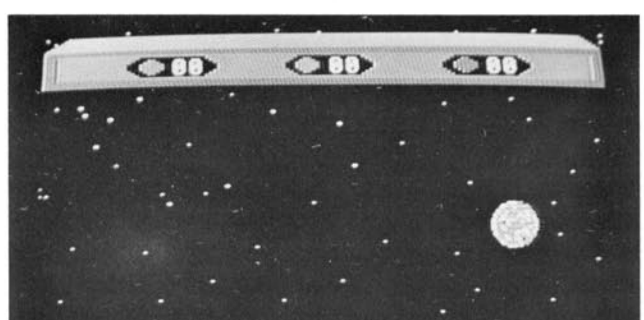
NAME:	Choplifter!
TYPE:	Arcade
SYSTEM:	Apple (now); Atari (soon)
FORMAT:	Diskette
# OF PLAYERS:	1
AUTHOR:	DAN GORLIN
PRICE:	$34.95
PUBLISHER:	BRODERBUND SOFTWARE

CHOPLIFTER! is an outstanding new release from Broderbund Software. Outstanding in that: 1) 3-D highly animated graphics are the best yet on the Apple, and ; 2) the game is truly a "new" game.

You can look at any game that has come out this year and not find one that is CHOPLIFTER!'s equal for graphics. A very realistic smooth scrolling screen with 3-D effects highlights this game which puts the player at the controls of a helicopter with the mission of rescuing the hostages from the Bungelings (a nation of militaristic ideologues). The first time you play you may well find yourself muttering "incredible" as you watch the screen. Photos with this article cannot do justice to the graphics and animation. The helicopter can appear to fly across the screen or turn and fire toward the screen with a nice 3-D effect. The 3-D effect also comes into play at the border crossing.

The animation is also outstanding. I got tickled when I saw the hostages wave to me as I flew overhead. I got even more tickled when I saw how realistically they ran to my 'copter when I had landed. But I burst out laughing when I returned them safely to base and saw them wave good-by as I left on another mission. The fighter attack sequence makes good use of the 3-D and animation which Dan Gorlin put into this game.

While trying to rescue the hostages from their barracks (which you may have to fire upon in order to set the hostages free) you are opposed by tanks, jet fighters, and drone air mines. The tanks fire at your craft while you are on the ground, and though not usually accurate on the first shot or two they become deadly accurate after that. Don't leave your 'copter on the ground for more than a



Continued on pg. 38

A New Column...

REAL WORLD GAMING

by Dan Bunten

INTRODUCTION

I guess by the fact that we all read this magazine, we share an interest in computer games! But there are so many different types of games. Also, it seems that each type only appeals to specific groups. There are arcade games, adventure games, wargames, business games, sports games, fantasy games and so on and so on. To be such a small group (at least for the time being) we surely have diverse tastes!

As a game designer, I am constantly reminded of the size of the various "interest groups" that make up the potential markets for my games. There is no doubt that the largest number of people at this point are interested in arcade/action games. However, I feel there is also a potentially large group that would be interested in simulation games if designers could only develop better games. *Real World Gaming* will examine the field of simulation games and offer game designers thoughts and techniques for better game design. In this first installment I will attempt to illustrate some of the vast potential inherent in the simulation gaming field.

Simulation games can let you experience a real-life field of endeavor that is not normally open to you. Such games, in one form or another, have always been popular. Monopoly, when it was introduced in the 1930's, probably derived a large part of its early success from the fact that people "down on their luck" from the depression could wheel and deal like real estate tycoons. Wargames, in a like manner, have offered many "would be" military strategists a chance to re-fight the great battles of history. You could even contend that many of today's arcade games are a type of "role playing" simulation game since many give the participant the chance to, for example, save the world from some dreaded foe.

However, all of these games have simplified the real-world to maintain "playability". In fact, this simplification often leaves nothing but an abstract shadow of what the real-world is like. Who could possibly believe that playing Monopoly is a realistic view of the field of land investment and development? Before the advent of computer games, most games were either so abstract as to have only a vague resemblance to reality or were so complex as to be unplayable for most people. But the computer offers the possibility of creating games that make realism playable.

Computers can reduce the conflict between the complexity necessary for realism and the simplicity required for playability. All the information needed to create a good "model" of a real-world field of interest can be kept by the computer. All the charts, probability tables and other paraphenalia needed previously in simulation games can be hidden away in a few computer chips. Players could then concern themselves only with the facts and decisions which parallel those required in the particular real-life area being simulated. The computer would do all of the work required for

analyzing the situations and generating results. Greater realism would still require more sophistication among the players, but this type of "complexity" would be a result of the knowledge needed to pursue the activity the game is simulating as opposed to being caused by the mechanics of the game. For instance, to play a good computer business management game, you might need to learn something about making decisions based on financial reports, *but you would not and should not have to know how to do the bookkeeping and detailed accounting to prepare those reports.*

Good simulation games would allow you to quarterback a professional football team, manage a multi-million dollar corporation, dabble in the stock market, explore for oil, fight glorious battles, ... all from the comfort of your own easy chair. These games would be "educational" without your even knowing that you are learning. They would be exciting in ways that arcade games couldn't possibly be. There are limits to the challenge of just coordinating a hand on a joy-stick with an eye on a video screen. But, since simulation games add a mental aspect, there are no bounds to the potential for fulfillment. (It's been said that there is no toy like the human mind).

So, if simulation games are so great, why aren't they more successful in the market? We are currently selling personal computers to the "right" people (although things may change later). The great majority of the computer games audience is made up of a more intelligent, better educated, relatively affluent elite. Some have proposed the simple answer that people just don't like to think. If this were true, humans would be in big trouble because many of the species we are driving to extinction can out-DO us but none can out-THINK us. I am certain this is not the reason why simulation games don't do very well. We need to look at the games themselves to get a reasonable explanation.

It often helps to better understand a muddled picture (such as computer gaming) for one to generalize a bit. For the purposes of discussion, let's say there are two extreme types of games: abstract and realistic. Checkers would be a good example of an extremely abstract game and wargames could represent the other end of the spectrum. However, wargames can vary considerably in their realism versus abstraction balance. Chess, for instance, could be considered to be a very abstract wargame. So, instead of two categories in which we could dump all games, abstract and realistic are the extreme points on a line. Checkers would fall very close to the abstract end of the line and moving toward realism you might find chess, Monopoly and wargames in that order.

In the case of "board" (or non-computer) games, the main feature of abstract games is the simplicity of their mechanics. Likewise, realistic board games are marked by a high complexity. In fact, the only reason most board games are so abstract, is because greater realism always meant more complexity before there were computers. I doubt that whoever "created" chess would have designed such arbitrary rules and abstract representations of feudal power had he had access to a method that could easily simulate the subject area with much greater realism. Nonetheless, even if you disregard this biased view of game design, it is still apparent that the old rules of "realism equals complexity" are less constant since the computer became part of games.

That notwithstanding, the unfortunate fact is that many computer simulation games are copying from our predecessors of the pre-computer days. We are using many game conventions that are no longer necessary. We don't need to have *turns* where each player gets a chance to make their input when we can allow simultaneous action. We don't need games built on game maps from the pre-computer era. In addition, there are capabilities offered by computers that were totally unavailable previously. The great success of arcade games should make it obvious that the inclusion of changing graphics and continuous physical involvement in games are attractive features. But since board games don't have such things, most game designers don't even attempt them.

Simulation games have a great potential but game designers have to go quite a distance towards new techniques in their programs. In the succeeding articles of this series, I shall describe some of the methods that can be used to improve games. Some of what I will write will be based on a formal education in Industrial Engineering, Operations Research and Systems Simulation. Other ideas will be based on experience gained "the hard way" (by spending many hours on a few games which netted little better than minimum wage). Finally, I hope to convey some of the things that others have discovered. *(Towards that end, anyone with interesting ideas to contribute, please contact me through Computer Gaming World.)* But, even if you are not interested in designing games, you should at least be aware of some of the things which will help you become a more discriminating consumer of what the marketplace offers.

I look forward to the day when simulation games will fulfill the potential I believe they have. I hope you will become a believer too! ■

Dan Bunten is the author of Computer Quarterback, Cartels and Cutthroats, *and* Cytron Masters; *all published by Strategic Simulations.*

CASINO

by Stuart Gorrie

BASIC INFORMATION

NAME:	Casino
TYPE:	Card Game
SYSTEM:	Apple II (Apple III Emulation)
FORMAT:	Diskette
# PLAYERS:	1
AUTHOR:	Bob Rosen
PRICE:	$39.95
PUBLISHER:	Datamost 9748 Coztcroft Ave Chatsworth, CA 91311 (213) 366-7160

For those of you who are interested in unusual values, here's one that you should consider. Take a look at CASINO by Data Most. This is an unusual value as it contains five games on one disk. For a mere $39.95, you receive *Blackjack, Keno, Poker, Roulette* and *Baccarat.*

CASINO provides it's user with a little personal touch. As you enter the CASINO, you are greeted and asked your name. CASINO knows if you have been here before, as, you see, it keeps track of it's clientele. CASINO knows *all* about you. The program not only provides you with a menu of the five game choices, it also provides you an additional four utility choices. The *New Player* option allows you to complete play as one person and resume play as another person. It also allows you to delete players from the list whom you are sure will never again return. *Stats* allows you to examine the play record of any client, tracking the winnings and losses of all games played. *Music* simply allows you to turn on or off the music which accompanies the play. Finally, *Quit* permits you to quit; at which time it bids you good-by, come again.

The game of *Blackjack* is fairly standard. You are playing against a dealer and may double down on card totals less than 12 and on soft totals. You may split any pair or 10 count cards but may only draw one card on split aces. The dealer must hit on totals of 16 or less and stand on totals of 17 and above. Insurance is offered and pays *two for one* along with blackjack. In terms of the micro-machine interface, unless you demand the personal touch, one dealer is as good as another. This is a fair game of blackjack. Starting the round, as you do, with $1000, if you enjoy playing *Blackjack,* you can play this one for hours.

Your next choice is *Keno.* Here, again, it appears to be a fairly standard game. A grid of ten by eight numbers (80) is displayed. You may choose from one to fifteen numbers by moving the cursor to selected positions on the grid. When the amount of numbers you indicate have been selected, the game draws it's numbers. As it selects it's numbers, the grid is marked to keep it's selections separate from yours. It marks common selections so that the end result, from *Keno's* point of view, is *yours, mine* and *ours.* Payoff is based on an algorithm dependent on the amount numbers you picked. If you choose to bet the same card more than once, simply suffix an "S" to your bet and your previous selections will remain in effect.

Moving right along, we find the next game to be *Poker.* Mind you this is not a normal game of poker, since it has no adversary, as such. Your competition is the standard list of resultant hands obtainable in a game of draw poker. Play begins with you placing a bet. Already at a disadvantage, because you have not yet seen your cards, you must determine what to bet. You are then dealt your five cards and have an opportunity to discard up to three. The cards are numbered left to right, one thru five, so you simply select the discards by their number. Your discards are replaced with the draw and there you have it. You have a standard obtainable hand or you don't--and therein lies the *payoff determination.* The payoffs are $1 for *one pair* (J thru A), $2 for *two pair,* $6 for *three of a kind,* $11 for a *flush* (this game), $26 for a *full house,* $101 for *four of a kind* and $1001 for a *straight flush* (ahmen). This style of poker is sterile, as it has, amongst other lackings, no allowance for bluffing. You should at least be allowed to view your cards before you place your initial bet.

The next choice is *Roulette.* It's standard, easy to play and, graphically, it's fairly well done. The playing field is displayed to the left of the screen and the roulette wheel, called "Roulette Square" because squares are easier to do graphically, is displayed to the right of the screen. Upon game entry, you once again have a stake of $1000 and are offered the opportunity to declare the value of your betting chips. Should you desire to change the chip value during the game, you may do so. For the placement of bets, cursor movement is required. Bets are placed using the "B" key and multiple bets per cursor placement are possible simply by depressing the "B" key the desired number of times. The wheel is spun and where she stops nobody knows. Payoff is thirty-six to one for a one number bet, eighteen to one for a two number bet, nine to one for a four number bet, two to one for a red/black bet and two to one for an odd/even bet. The graphics are fairly well done and the spinning of the wheel is accurate. For betting purposes, the cursor movement is a little slow and the mechanics of it could be improved. It is, however, still an enjoyable game; so place your bets and spin the wheel.

The last choice is *Baccarat.* Player and dealer are each dealt two cards which are then totaled. The value of the low order digit of the total is what is important in the game. Player and dealer each have a different set of rules for play that are hierarchical. For a total of zero thru four, the player must draw a card. With a total of five, the player has the option of drawing a card or passing. Given a total of six or seven, the player must pass and for totals of eight or nine he must show his cards. The dealer rules are a little easier. For totals of zero thru five, the dealer must draw a card. The dealer must stand on totals of six thru nine. In the environment presented here, the player must be quite familiar with the rules as there is very little player-micro interaction. The game is fairly fast and automatic except for the circumstances where the player has a five point total with the option to draw or pass and the dealer has less than six. At this point, you have to input your choice. Aside from that, the only other time you interact is when you bet. For the beginner, this game can be frustrating due to the short display time for each play. You must pay strict attention to what goes on to see how the hierarchy works. ■

MICRO - REVIEWS

DEADLINE

BASIC INFORMATION

NAME:	Deadline
TYPE:	Adventure/Mystery
SYSTEM:	Apple II, Atari 400/800, IBM PC, NEC PC-8000, CP/M, PDP-II
FORMAT:	Disk
PRICE:	$49.95
PUBLISHER:	Infocom 55 Wheeler St. Cambridge, MA 02138

Deadline is a classic adventure program by INFOCOM, the people currently publishing Zork and Zork II. Happily, it uses the same type of command parser as the Zorks, and it's specialized vocabulary gives you the feeling of really being there. It is frustrating, involved, and realistic.

The documentation for this program is excellent, taking such forms as a lab report, police statements, coroner findings, and the like. That gives you the basic evidence you need to proceed.

Some of the commands available are new, and are extremely useful. You can catch someone's attention (if they are moving away from you) by calling their name. You can interrogate them by saying something along the lines of "Glenda, tell me about Fritz". It can either be a person or an object you ask about. Also, the "show me" (as in "Fred, show me the keys") is useful. There are many other questions you can ask, too.

Other commands available are: ACCUSE someone OF something, ANALYZE something (gets police lab to check for common things), ANALYZE something FOR something (more specific and usually more accurate), ARREST someone(s), ASK someone ABOUT something, FINGERPRINT something, LOOK BEHIND something (LOOK UNDER also works), and SHOW something TO someone (usually to provoke a reaction) all add to the flavor of the game. The command structure is also a bit freer than that of their previous adventures, which makes the game almost conversational.

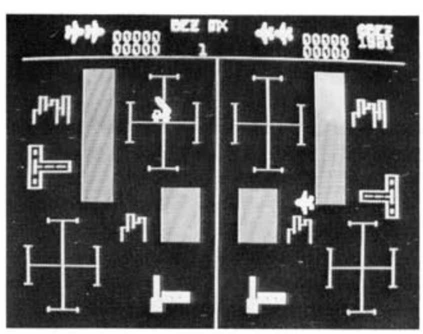
Unfortunately, I found the solution disappointing. There are a lot of false trails, which is understandable, and even good. A real murder mystery would have false trails. There is a lot of evidence which isn't needed, which would also be true of a murder mystery. Actually, a person could stumble on the solution on their first or second try, but it will take most people a LONG time. Four friends and I worked on it as a group and solved it in about a month.

On the bright side, this is a thoroughly intriguing adventure. It has some very good features that aren't apparent--for instance, if you arrest someone, you had better have evidence--you won't really find out if you have enough evidence until they are on trial. Once, I got the correct murderer, but didn't have the right evidence, so the person got off free. You do indeed have to prove they did it beyond a reasonable doubt, and had a motive. This is something many detective shows on TV lack--they don't follow up the case.

In all, I thoroughly recommend the adventure, despite my dislike of the solution. After all, I have no say in who murdered who, it's merely my job to find out "who done it." Much of my recommendation lies on the excellent command parser, as well as my love for mysteries. This made me feel like a detective, frustration and all. I'm waiting for the next one.

Deirdre Maloy

BEZ-MX



BASIC INFORMATION

NAME:	BEZ-MX
TYPE:	Wargame/arcade
SYSTEM:	Apple II
FORMAT:	Disk
# PLAYERS:	1 to 2
AUTHOR:	John Besnard
PRICE:	$29.95
PUBLISHER:	BEZ 4790 Irvine Blvd., Box 19633 Irvine, CA. 92714

The recent months have seen several games come on the market which try to marry arcade and strategy game elements. These games, of which CE Software's **MISSION ESCAPE** and Avalon Hill's **GUNS OF FORT DEFIANCE** are good examples, are games which emphasize the mental aspect of a strategy game while also requiring the agility so important to the arcade game. To a degree BEZ-MX falls into this hybrid game catagory.

BEZ-MX is a two player wargame in which the players try to destroy each other's military-industrial strength while preserving their own. There is a basic game and an advanced game. In the basic game players deal with two variables; the deployment of their MX missiles and the utilization of BEZ-1 bombers. The MX missiles can be moved between silos or fired at enemy targets. The BEZ-1 bombers can be used to fly bombing missions or to intercept enemy planes (which results in the destruction of both planes). Bombing missions are executed by entering the coordinates of the target and sending the bomber on it's way. Intercept missions can be flown with the aid of paddles (the arcade element of the game) or by entering a flight plan through the keyboard.

Movement of MX missiles seems to serve but one purpose. MX missiles in launch sites closer to the center of the country have a better chance of intercepting enemy planes as they cross the border (that's right, the missiles can perform either ground-to-air missions or strategic bombing missions). Earthquakes can occur which can destroy launch sites and/or roads which lead from site to site.

The real strength of BEZ-MX is in the advanced game which requires planning. In addition to the elements in the basic game, players of the advanced game must maintain industrial production in a war situation. Players assign the population of their countries to work on the farm, factory, airfield, or city. You can have the people work in these areas (which will help keep military goods in production) or you can hide your population in shelters (perserving population but ending production). Strategy entails keeping production up while exposing the smallest amount of population to destruction as possible. For example, if you put a large percentage of population in the factory, you will increase production but could suffer a terrible loss if the enemy bombs the factory that turn.

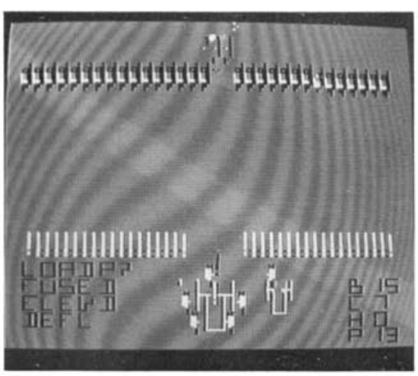
While BEZ-MX is a two player game, a solitaire version is available for human vs. computer play. The computer opponent is smart enough to analyze human strategy on prior turns and plan it's move accordingly. Therefore a variety of strategies is needed to successfully compete with the computer.

Documentation is adequate. The rule book does a good job of describing most of what you need to know. The rules include a page of strategy tips but there are a lot of techniques left for the players to discover on their own. There are still plenty of ideas that the players will have to develop on their own. A hardcopy of the map is included for plotting coordinates of attack. The physical presentation of the game (i.e. rule book, zip-lock bag, intro screen) is not as glossy as the larger software houses but is adequate.

The pure arcadist will probably not find BEZ-MX his cup of tea but for those of you who like strategy games with a little arcade flavor, at $29.95 BEZ-MX is worth considering.

Luther Shaw

GUNS OF FORT DEFIANCE



BASIC INFORMATION

NAME:	Guns Of Fort Defiance
TYPE:	Strategy/Arcade
SYSTEM:	APPLE II, TRS-80, PET, ATARI
FORMAT:	Tape and disk
# OF PLAYERS:	1
AUTHOR:	David A. Wesely
PRICE:	$20.00 to $25.00
PUBLISHER:	Avalon Hill Microcomputer Games 4517 Harford Road Baltimore, Maryland 21214

In GUNS OF FORT DEFIANCE the player commands a gun crew which protects a partially unfinished American stockade from the onslaughts of those imperialistic "lobster-bellies" in the War of 1812. The player may be faced with artillery, cavalry, or infantry in making his courageous (defiant?) stand. The game is simple in game mechanics, but has some wicked facets to master.

There are several interesting variables which keep this from being just another arcade game. First, there is a handicap. This number, ranging from the simplest (1) to the most difficult (63 on the Apple, 64 on others) determines how difficult the scenario will be in terms of ammunition available (type and amount) and casualties needed to inflict for a rout. When the player routs the enemy, the handicap is increased and, of course, when the player's crew runs away, the reverse is true. Although I haven't gotten beyond 53 yet, the computer does seem to figure in how quickly and efficiently one deals with a given situation as it revises the handicap after the conclusion of each scenario. This is a feature to keep the game challenging, long after the basics are down pat.

Second, one of the most important decisions for a gun commander to make is selecting which type of rounds to fire. The basic ammunition is ball and cannister. The program also has allowances for double cannister. Beyond these basic ammo types, the player may opt for spherical case or shell ammunition. These last two types add another variable —fuse length. One can choose the right ammo and range and the wrong fuse length will still produce negligible results.

The player can use these ammo types in conjunciton with one another to a good strategic advantage. For example, the player may fire the more readily available ball ammunition until he finds the range and then switch to the more effective, but less plentiful, spherical case ammunition. Further, experience soon teaches one that ball ammo is not very effective in counter-artillery fire and that it is foolish to wait for cavalry to reach double cannister range.

Finally, the gun commander must determine range and deflection (i.e. aim). As the handicap increases, this seems to be more and more important. The cavalry, especially, have a tendency to be able to close range faster than my befuddled fingers can type orders. Hence, one often has to think ahead in terms of range estimation.

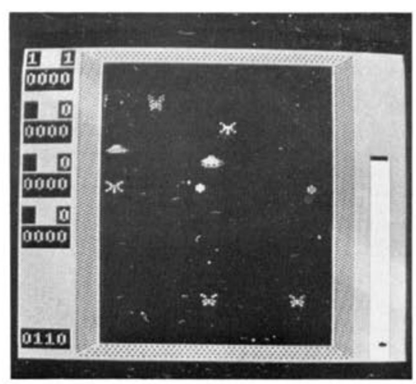
The "Apple" version has some interesting differences with the basic game version. One of the most valuable is with the infantry attack. When your fire is effective enough to endanger the morale of the infantry, they halt, dress ranks and fire off a volley. This develops a smoke screen which disrupts your aim for two to three shots. Then, when you do successfully rout the infantry, the figures run away, leaving muskets and packs behind them. The smokescreens enhance the play of the game and the graphics enhance the joy of winning. Another interesting "Apple" graphic is the ability to adjust the tint so that the player may fight either British (redcoats) or American (bluecoats) troops (Anglophiles take heart!)

Graphics aside, the Apple enables players to take turns and keep their handicaps up-to-date by repeating the briefing prior to each game. Also, the audible beep when a shot effectively hits the enemy howitzer is most helpful.

GUNS OF FORT DEFIANCE is an exciting addition to a game library because: 1) it offers a challenging game without tying the player up for long time periods; 2) it's easy to teach the mechanics to a beginner; and 3) the handicap system enables the game to grow with your own ability.

by Johnny L. Wilson

TSUNAMI



BASIC INFORMATION

NAME:	Tsunami
TYPE:	Arcade
SYSTEM:	Apple II
FORMAT:	Diskette (DOS 3.3)
# PLAYERS:	1 to 4
AUTHOR:	Rodney McAuley
PRICE:	$29.95
PUBLISHER:	Creative Computing Software 39 E. Hanover Ave. Morris Plains, NJ 07950 (800) 631-8112

Here is yet another derivative of **SPACE INVADERS.** This one is actually 12 games in 1; selectable

from a menu that also lets you turn the sound off and choose either paddle. Each game consists of a sequence of "attacks" with the aliens coming at you in a different pattern each time. Most of the games use eight attack patterns (which repeat predictably); but some use sixteen. They may move horizontally, they may bounce, jitter, or weave sine wave patterns. Sometimes the only danger is from bombs they drop, while at other times they come at you like kamikazes. At other times the aliens have defensive barriers which protect them from your shots; sort of like **SPACE INVADERS** in reverse.

While the difficulty level ranges from very easy to moderate, things are complicated by the presence of a *timer*. If time runs out, you lose your base anyway so you have to be quick! The timer resets for each new wave, with any time left on the timer after you shoot the last alien converted into *bonus points*.

Although you can always abort the game with RETURN or the spacebar, there is no pause function. I don't see this as a drawback since you always get a pause between attacks. Perhaps more important is the inability to play the game without a paddle.

What is most interesting about TSUNAMI is the fact that the actions of the aliens are similar to a number of different arcade games that fall in the **SPACE INVADER** family. The player will recognize several familiar patterns in the various attack patterns of TSUNAMI. Some of those that will occur are: Centipede, Space Invaders, Galaxian, and Circus. For those who like "Invader" games, TSUNAMI will be of great interest due to it's variety and professional quality.

Bob Proctor

MICRO GOLF

BASIC INFORMATION

NAME:	**Micro Golf**
TYPE:	**Arcade sports game**
SYSTEM:	**Apple II (48K)**
FORMAT:	**Disk**
# PLAYERS:	**1 to 4**
PRICE:	**$19.95**
PUBLISHER:	**Creative Computing Software 39 E. Hanover Ave. Morris Plains, NJ 07950**

Though the name sounds rather ordinary, **MICRO GOLF** is a very exciting and challenging game. The game is based on miniature golf, meaning that bounce shots come into play and are very important. Play is controlled with paddles or keys. You control the angle at which you will hit the ball and how hard you will hit it. The game comes with three 18-hole courses, plus the ability to make your own courses. This is an excellent feature because you can really get creative with these courses and play them in any shape you want like ships, people's faces, or whatever.

You can play the game with one to four players. Playing alone is fun, but with more players, it can be really exciting. The program keeps track of everyone's score and par for each pole. Of the three courses, two are miniature golf type shapes with lots of banking coming into play. The third course is a really beautiful course where you play on animal-shaped holes, everything from pigs to dragons. These seem very complex, but many of them can be scored hole-in-one with the right angle on your tee shot.

Creating your own hi-res course is at first somewhat complex, but it is not hard to get the hang of it. This is what will make the game remain interesting after the time when you get so you know all of the courses and how to beat them. You can create your own courses, making them as easy or as hard as you wish. When creating your courses, you decide where the ball will be to start, where the cup will be, the position of any obstacles, and par for the course. After you have created your masterpieces, you then save it on disk. This may either be the MICRO GOLF disk itself or a back-up disk created by the program. Once you have saved on disk, you can go to the golf program itself and try out your hole.

One feature that you have to look out for — the person who scored the lowest on the last hole shoots first on the next. This is in the spirit of real golf, but if you don't know this is going on, the score will be all jumbled.

One of the best features of this game is that it is not limited to a special age or interest group. It is great for showing people your computer because there aren't hefty rules to learn, you can just start playing, and it is still very challenging for everyone.

Bob Boyd

Continued from pg. 1

The single most common response on the comment section of the READER INPUT DEVICE is "please run more articles on... (you fill in the blank)". You readers want more adventure articles, more arcade articles, more wargame articles, more Atari articles, and on and on. That excites us and we hope to do more. But the number of articles is not only limited by space; to a larger degree it is limited by the number of good articles we receive. With each issue we enjoy a larger supply of good, interesting articles, but we still need more. Keep them coming. Write us letters. Fill out the READER INPUT DEVICES. Enjoy the magazine.

PLEASE TAKE TIME TO FILL OUT READER INPUT DEVICE (P. 40)

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enemy is coming straight at you. Maneuver your Fighter directly behind the Freighter and have both ships launch drones at the enemy's lead ship.

In the second turn the enemy ships will swoop down on your Freighter. The lead ship may hold its position and reinforce its shield but it can't defend against two drones. Move both your ships forward at 8 Mk. and put all your Freighter's extra energy into the front shield. Launch a drone at the two remaining enemy ships and lock your phasers on the closer ship. The Freighter should fire at a range of 5 Mk. and the Fighter, last instant. If the enemy eludes the drone then it will take the Freighter's phasers in the rear as it flys over. If it peels off it will still get hit in the side by one of the phasers along with your Fighter's phasers.

If any of the enemy do get through, Freighter's front shield may be badly damaged or destroyed. If there are any surviving enemy ships then have your Freighter hold his position and turn around while your Fighter moves out to intercept.

From here on it will be best to move your Freighter backwards while reinforcing its rear shield. Remember, when you are allocating energy and moving, it takes fifty percent more energy to move backwards and you have to input headings that are 180 degrees off from the direction you want to move.

Dreadnought vs. nine Imperial Raiders

This should be the easiest victory you'll ever score. The enemy has twice as many total Starship points as your ship and with a little care you shouldn't even lose a shield. You can use either Dreadnought but I prefer the Klarson because you can attack a fourth ship each turn by launching a drone.

Maintain a steady speed of 6 to 8 Mk. for the duration of the game. Start by moving straight at the enemy and launch a type two drone at the lead ship.

The computer doesn't handle large numbers of ships very well and will probably only mobilize half its fleet. If this is the case then continue moving at the enemy and put your extra energy into the front shield. Lock your weapons on three ships so they fire at a range of 5 Mk. If, on the other hand, it looks like the computer is going to attack with six or more ships then it will be better to parry the blow by turning to a heading of 090 degrees and reinforcing shields 4, 5, and 6.

After this the game becomes a free for all with ships everywhere. However, because its ships are scattered, the computer has lost the initiative. You should just keep moving, turning and firing. It will be like shooting fish in a barrel.

Attack on an Outpost by Fighters

In this scenario you will use four or five Fighters to create a drone swarm. To achieve a decisive victory you would use four Fighters, which will give a higher victory point total, but I suggest you use five because the two extra drones can mean the difference between success and failure.

Normally you would use fleet orders, but on the first turn give individual instructions to your Fighters so you can rendezvous in a tight cluster about 35 Mk. from the Outpost. On turn two set speed at 11 Mk. and use any extra energy for reinforcing the front shield. On turn three, charge one phaser, launch a drone and set speed to 15 Mk. You will finish this turn at a range less than 15 Mk. and will lose one ship to phaser fire. Don't bother reinforcing shields because at this range the effort is futile and the energy wasted.

Now on turn four, charge your second phaser, launch your last drone, accelerate to 19 Mk. and fire your phasers using the last instant command. Move your fleet on the heading toward the Outpost for twelve time points. This should put you past the Outpost where you want to make a hard right turn to bring you facing the Outpost. This will, hopefully, put you in position to fire into the open shield on your next turn.

The drones and perhaps your phaser fire will not all hit the same shield, but enough damage should be done to cripple the Outpost. If you fail to destroy the Outpost, then use what fighters you have left to fire at the beginning of the next turn. If you hit an open shield you should destroy the Outpost.

Attack on a Starbase

Attacking a Starbase is a difficult task if you limit yourself to ships that have a total starship value of twenty-four points. You may not achieve a decisive victory against a Starbase but your best chance to do so is to use two Alliance Dreadnoughts and a Cruiser. Use the Cruiser as your decoy by moving it slowly toward the Starbase. All extra energy should go to the front shield. You'll have to stop about 16 to 17 Mk. from the Starbase which will be good enough.

While you're positioning your Cruiser, the Dreadnoughts should be overcharging their photon torpedoes and picking up speed by running in a circle. When your Cruiser is positioned you want to maneuver your Dreadnoughts so they finish their turn behind your Cruiser facing the Starbase about 18 to 23 Mk. away and with a speed of 20 Mk.

In this next turn set the speed of each Dreadnought so you wind up just short of the Starbase. Energize all transporters, including the Cruiser's, and fire your photon torpedoes at a range of 3 Mk. and your boarding parties aboard. You may also find the Starbase firing its photon torpedoes at your lead Dreadnought.

With luck you should knock out most of the Starbase weapons but you may still lose one of your Dreadnoughts on this next turn. Hold your position, recharge your phasers and transporters and put all additional energy into your facing shield. Fire immediately to knock out general shield support and get your second wave of boarding parties aboard. Your Cruiser is no longer in danger of being fired upon, so you can start bringing it up to add its fire power to your attack.

In the next turn you will want to time your fire to hit the open shield as it comes around. The Starbase rotates 200 degrees in a turn and the same point you hit before will be facing your ship about time point 12 or 13. Your Cruiser should be in range by that time to fire its photon torpedoes. The Starbase will be so crippled by now that it is only a matter of time before it is destroyed, so keep firing your phasers each turn to destroy a shield and inflict additional damage.

* * *

The strategies presented in this article can be applied to most any scenario; I hope they lead you to great victories and increased enjoyment from THE WARP FACTOR.

SSI will be releasing a new space wargame this summer written by THE WARP FACTOR'S designer, Paul Murray. Fans of THE WARP FACTOR won't want to miss it.

Continued from pg. 29

anti-tank strengths are printed directly on the counters, with a review accessible on the back page of the rules booklet. Mechanized units have the ability to fire on enemy mechanized units during the enemy movement phase. Artillery units can fire indirectly at targets up to five squares away if they haven't been moved or attacked, and are in static mode.

The Game as Game

The flow of play is fast with victory being won by possession of geographic objectives. There are six possible sites that represent strategically vital areas. The only possible criticism of **DNIEPER RIVER LINE** by this reviewer is the exclusively *territorial nature* of the victory conditions. A possible alternative could have been another algorithm (yet more complex!) incorporating general disruption levels and territorial control for the victory conditions, reported each turn.

With skill and pluck, victory is possible a majority of times. Critical decisions have to be made early, and these decisions have a critical effect on later play. Infantry-based units have good defensive abilities, but have difficulty running between emergencies. Mechanized units are fast and useful for "fire-brigades", but have limited staying power. Odds of 2 to 1 or better are necessary for a reasonable chance of success, odds which (unfortunately for the German player) are difficult to attain in counterattacks.

The basic problem for the German player is having to run between emergencies (that are immediate and unpredictable) with insufficient forces; or, in other words, "how can you be two places at once when you're not anywhere at all?" Often objective sites simply cannot be held with thinly-dispersed forces, and must be yielded up to the maws of the Russian juggernaut. The timely arrival of desperately needed reserves and artillery interdiction can save the situation, however. A typical level 3 (difficult) or level 4 (very difficult) game can last the entire 8 turns, with the outcome completely unpredictable, as German units are decimated while trying (in vain) to hold major objective squares. The presence of partisans and paratroopers can add even greater frustration to the predicament of the German player, as weak Russian units slip into ungarrisonned objectives by the back door (objectives once taken are irretrievably lost to the Russians).

DNIEPER RIVER LINE incorporates the elements of historical accuracy, as well as fast-paced situation-in-doubt play to produce a well developed game which computer wargamers should "check out". ■

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couple seconds when a tank is around. Fortunately, the tanks can only hit you while you are on the ground. You can take off and begin to fire back. The trouble is that at times it seems like you have run into a whole armored division instead of the few you might expect to meet. Once the immediate area is cleared of tanks you can land and take on hostages. The 'copter can hold 16 persons (by coincidence the same as the number of hostages in each barrack). When you get as close to a full load as you can (or want to) you high-tail it back to your side of the border and disembark the rescued hostages at the U.S. Postal Service distribution center (you read it right!--Your helicopter was smuggled into the center, disguised as a mail sorting machine).

On your first trip you have only the tanks with which to contend. After your first trip, however, the jet fighters come into play and a little later the drone air mines begin to pursue you. The jet fighters can either shoot you down with missiles or bomb you on the ground. You will find they will be bothersome on your way in if you keep your gun firing at the edge of the screen where they are likely to appear. The real tricky part is the flight back. They seem to be more numerous and more deadly then. There is nothing more frustrating in this game than to successfully rescue 16 hostages on the ground in the midst of hostile tank and fighter fire only to have all 16 die in a firey crash on the way back to base. While the fighters are quite dangerous when you are airboard, they are less a problem when you are on the ground. When your 'copter is on the surface the fighters will make a bombing run. Most of the time they will miss your plane (although the bomb it drops will often take out a hostage). I tend to ignore the planes when they are on their bomb runs which gives me more time to get hostages aboard.

The drone air mines will pursue your 'copter once they find you, however they are fairly easily avoided and can be shot down without too much trouble. The most dangerous time of mission will be when you are in transit from the rescue site to the base (and vice-a-versa). It is very common to be flying along and have a fighter or a drone streak in without warning and send you and your would be survivors to a firey grave (even the burning 'copter is realistic enough to remind one of the U.S. fiasco in the Iranian desert).

There are 64 hostages each of which is worth one point if transported safely to the distribution center. Thus the high score is 64. But don't scoff at this low "scoring ceiling". Getting all 64 home safely is a task that few gamers are likely to ever accomplish. ■

Continued from pg. 5

The Software Farm, Inc.
3901 So. Elkhart St.
Aurora, CO 80014

CRICKETTER: Similar to the popular arcade game FROGGER, CRICKETEER involves getting your cricket safely across a busy highway and a dangerous river. Hazards are birds which can swoop down and eat the cricket, fast moving vehicles, and flotsam which doesn't always float. Along the way your apparently male cricket can get extra points for pairing up with a lady cricket and getting her safely across the river. Additional points can be had for jumping into a home box containing food particles.

Riverbank Software Inc.
Smith's Landing Road
P.O. Box 128
Denton, MD 21629

INTERNATIONAL GRAN PRIX: A very well done game of GRAND PRIX car racing. You sit behind the wheel while running any one of five different courses. Courses include Oulton Park, Warwick Farm, Karlskoga, Monaco, and one fictional course, Riverbank. We hope to print maps of the courses in a future issue.

Taaumi Software
8 North Grosvenor Ave.
Burnaby, B.C. V5B 1J2

HORSE RACING CLASSIC: The best looking horse racing game on the market. HRC is a simulation of thoroughbred horse racing and track betting. The simulation includes a history of the most recent races for each horses in the race (set up like the racing form). There are 100 horses in the program's data file. A very good party game.

Sentient Software
P.O. Box 4929
Aspen, CO 81612

CONGO: You are on a raft in the Congo River and must avoid rapids, natives, and other assorted dangers as you rescue survivors on the way to saving yourself. In this arcade game you must make use of the flow of the river along with your ability to paddle upriver to avoid danger and reach your goal.

GOLD RUSH: A graphic game in which the player makes his way from the train station to a mine. His way is blocked by several evils including a claim jumper. The game requires quick reflexes. To relax even a brief moment will most liking result in death.

CYBORG: Written by the author of the popular Oo-TOPOS adventure, CYBORG is an adventure game with a twist -- there are no treasures or scores. CYBORG contains real-time graphics simulation and character development. You play the character of a CYBORG, complete with a second opinion running around in your head provided by the electronic brain which NASA II planted in your brain (thanks, guys). Well-done.

CE Software
801 73rd St.
Des Moines, IA 50312

SWORDTHRUST 6: "The Eternal Curse" -- Don Brown's sixth game in the ongoing series.

SWORDTHRUST 7: "The Hall of Alchemie" -- the seventh game in the series and the first by a writer other than Don Brow, Peter Wityk.

Sensible Software
6619 Perham Dr.
West Bloomfield, NI 48033

QUADRANT 6112: This is a space combat game similar to the coin-op game Omega Race. Rebel ships enter space through star-gates. Your task is to shoot them down while patrolling the quadrant. Scores go up as you complete laps around the quadrant while blasting the enemy.

Krell Software Corp.
21 Millbrook Dr.
Stony Brook, NY 11790

SUPER STAR/ALL STAR BASEBALL: A rather poor attempt at a stat baseball game. Players select their team members from lists of stars, past and present. Once the teams are selected the gamers have performed their primary task in the game. The computer plays the game allowing limited user interaction. Your starting pitcher stays in the whole game. Runs on the Apple, PET, and TRS-80.

ISSAC NEWTON + F.G. NEWTON: ISSAC NEWTON is a game of logic in which players must assemble evidence and discern the "Laws of Nature" which have produced the evidence. FULL GRAPHICS NEWTON presents the same game in graphic form and is suitable for children.

HAL LABS
4074 Midland Rd. Suite 23
Riverside, CA 92505

SHEILA: SHEILA contains adventure game elements in what is basically an maze-chase type arcade game. Your task is to fight through five levels of a castle and rescue SHEILA who is locked in a tower. A variety of weapons and magical items can be found which can assist you.

Continued from pg. 22

If you still have doubt about the wisdom of buying a book full of previously published programs, "Captain 80" offers one more incentive: Part two offers a particularly unique program. Computer programs designed to create other programs are receiving attention throughout the industry, evidenced by recent demonstrations at computer fairs and exhibitions. The "Adventure Generator", provided in part two, is an experimental entry in this field. Authored by freelance programmer David Huntress, it is a previously unreleased program which creates a basic language adventure program by inputting information into a disk data file and then reading it back as basic statement lines.

Admittedly, it's an experimental design. The finished adventure program which it produces is as bare-boned as an underweight Greyhound and may require debugging. But the novelty of this generator program outweighs its handicaps. Even at its current stage of development, the "Adventure Generator" can be used to quickly create a series of simple, personalized mini-adventures. And it may provide a glimpse of the future, when humans will simply write computer programs which, in turn, will produce other programs. It's an interesting and appropriate addition to this book of adventurers.

Although the $19.95 price tag is a bit steep (considering the economy level quality of the printing and binding), the book is still a great value if you really intend to make use of all the program listings. The bad news, of course, is that it will take you about three months of steady typing to input the listings and another three months to debug your typographical errors. I'm still working on this task myself, so I can't tell you if all of the programs run as advertised. If I find any errors, I'll let you know in future issues. In the meantime, watch out for sleeping dragons, and have fun adventuring! ■

READER INPUT DEVICE #3

GAMES

Rate the following games using a scale of 1 (terrible) to 9 (outstanding) for each of the catagories below;

PRESENTATION: Rate overall presentation of the game. This includes such factors as graphics, sound, packaging, documentation. **GAME DESIGN:** Rate the game design itself. Apart from the presentation is the game well designed, playable, interesting? Are there problems in the design which make the game less than it should be?; **LIFE:** Does the game wear well? Does one bore of the game easily or does it still command interest after multiple plays?

Enter "0" in the first box for any game which you have not played or have not played enough to have formed an opinion.

1. THE WARP FACTOR (SSI)
2. WALL STREET (CE)
3. CONGLOMERATES COLLIDE
4. STOCKS & BONDS (AH)
5. CONTROLLER (AH)
6. PURSUIT OF THE GRAF SPEE (SSI)
7. STARSHIP COMMANDER (VOYAGER)
8. RENDEVOUS (EDU-WARE)
9. CHOPLIFTER (BRODERBUND)
10. CASINO (DATAMOST)
11. GUNS OF FORT DEFIANCE (AH)
12. BEZ-MX (BEZ)
13. FIREBUG (MUSE)
14. ADVENTURE TO ATLANTIS (SYNERGISTIC)
15. LABYRINTH (BRODERBUND)
16. KNIGHT OF DIAMONDS (SIR-TECH)
17. JABBERTALKY (AS)
18. TEMPLE OF APSHAI (AS)
19. EMPIRE OF THE OVERMIND (AH)
20. CHICKEN (SYNAPSE)
21. HORSE RACE CLASSIC (TAAUMI)
22. CANNONBALL BLITZ (ON-LINE)
23. DEADLINE (INFOCOM)
24. KABUL SPY (SIRIUS)

ARTICLES

Rate the articles in this issue on a scale of 1 (terrible) to 9 (outstanding). If the article does not interest you enter 0. Use "PRS"box.

25. WINNING AT WARP FACTOR
26. WE'RE IN THE MONEY
27. CONTROLLER REVIEW
28. SILICON CEREBRUM
29. GRAF SPEE REVIEW
30. STARSHIP COMMANDER REVIEW
31. RENDEVOUS REVIEW
32. ADVENTURES BY THE DOZEN & 1/2
33. ATARI ARCADE
34. DNIEPER RIVER LINE REVIEW
35. CHOPLIFTER REVIEW
36. REAL WORLD GAMING
37. CASINO REVIEW
38. SNEAK ATTACK ON K.O.D.

MISCELLANEOUS

(Use "PRS" box)

39. What computer system do you own?

    1=Apple; 2=Atari; 3=TRS-80; 4=PET; 5=IBM; 6=Other.

40. Pick the catagory of personal computer game that most interests you (i.e. which catagory would you most like to read about?):

    1=Arcade; 2=Wargame; 3=Adventure; 4=Other (please explain).

A. What is your biggest complaint about computer games on the market today?

B. Other Comments

RESULTS OF R.I.D. #2

There were 121 Reader Input Devices turned in by press time for this issue. Of this number 64% were Apple users, 26% Atari users, 6% TRS-80 users, 4% others. All but two of the 29 games offered for review in R.I.D. #2 received enough responses to be included in the results. If a game is not evaluated by at least 10% of the user group to which the game belongs (i.e. Apple, Atari, TRS-80, etc.) it will not be included in the R.I.D. Results.

The "% Play" column indicates what percentage of the respondents which have the appropriate machine have played the game. For example, EASTERN FRONT was played and evaluated by 89% of the respondents who have an Atari 400/800.

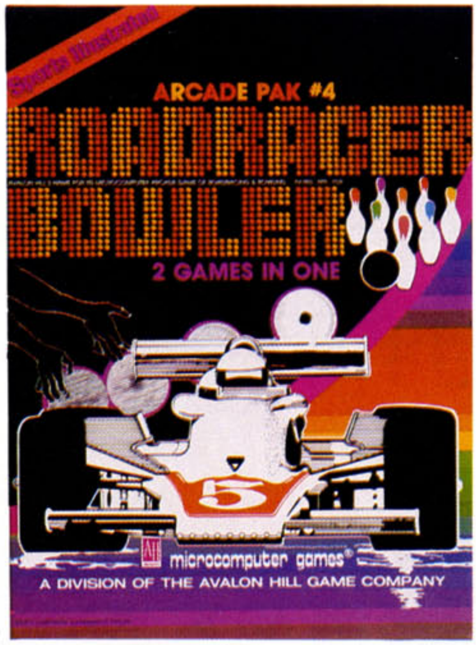
Our special question last issue had to do with **PIRACY**. We asked you to tell us which of the games listed you had bought and which you had pirated copies of. The total percentage of pirated games were 27%. The Apple games were 30% pirated, the Atari games 9%, and the TRS-80 games 8%.

GAME	PUBLISHER	MACHINE (S)	COMPOSITE	PRESENTATION	DESIGN	LIFE	% PLAY
1. WIZARDRY	SIR-TECH	AP	8.25	8.00	8.52	8.23	49
2. COMPUTER BASEBALL	SSI	AP	7.80	7.83	7.87	7.70	35
3. OLYMPIC DECATHALON	MICROSOFT	AP	7.79	7.95	8.11	7.30	61
4. SOUTHERN COMMAND	SSI	AP	7.71	7.75	7.80	7.59	30
5. CARTELS & CUTTHROATS	SSI	AP	7.26	7.41	7.35	7.00	25
6. EASTERN FRONT	ATARI PE	AT	7.25	7.83	7.48	6.43	89
7. DAVID'S MIDNIGHT MAGIC	BRODERBUND	AP	7.24	7.56	7.59	6.58	43
8. SHATTERED ALLIANCE	SSI	AP, AT	7.16	7.48	7.38	6.61	32
9. CASTLE WOLFENSTEIN	MUSE	AP	7.13	7.30	7.45	6.63	67
10. PRESIDENT ELECT	SSI	AP	6.97	7.30	7.23	6.38	19
11. DNIEPER RIVER LINE	AVALON HILL	MANY	6.93	6.80	7.09	6.90	10
12. NAPLEON'S CAMPAIGNS (1813 & 1815	SSI	AP	6.88	7.19	7.00	6.46	22
13. ZORK	INFOCOM	AP	6.87	6.41	7.48	6.73	57
14. TIGERS IN THE SNOW	SSI	AP, TRS	6.62	6.81	6.75	6.31	16
15. SWASHBUCKLER	DATAMOST	AP	6.48	7.34	6.86	5.24	42
16. ROBOTWAR	MUSE	AP	6.44	6.70	6.63	6.00	59
17. CRUSH, CRUMBLE, CHOMP	EPYX	AP, AT	6.43	7.02	6.73	5.53	51
18. A2-FS1 FLIGHT SIMULATOR	SUB LOGIC	AP, TRS	6.33	6.42	6.82	5.74	48
19. ODYESSEY	SYNERGISTIC	AP	6.26	6.27	6.75	5.75	49
20. TIME ZONE	ON-LINE	AP	6.24	7.09	6.18	5.45	16
21. BUG ATTACK	CABALIER	AP	6.22	6.97	6.31	5.37	33
22. SWORDTHRUST SERIES	CE SOFTWARE	AP	6.21	6.27	6.72	5.63	16
23. TORPEDO FIRE	SSI	AP	5.99	6.42	6.14	5.42	30
24. GALAXY	AVALON HILL	MANY	5.25	5.42	5.42	4.92	13
25. MAJOR LEAGUE BASEBALL	AVALON HILL	AP, TRS	5.13	4.80	4.69	5.90	10
26. TANKTICS	AVALON HILL	MANY	5.05	4.88	5.27	5.00	23
27. B-1 NUCLEAR BOMBER	AVALON HILL	MANY	3.97	3.97	4.29	3.64	34

AH QUALITY

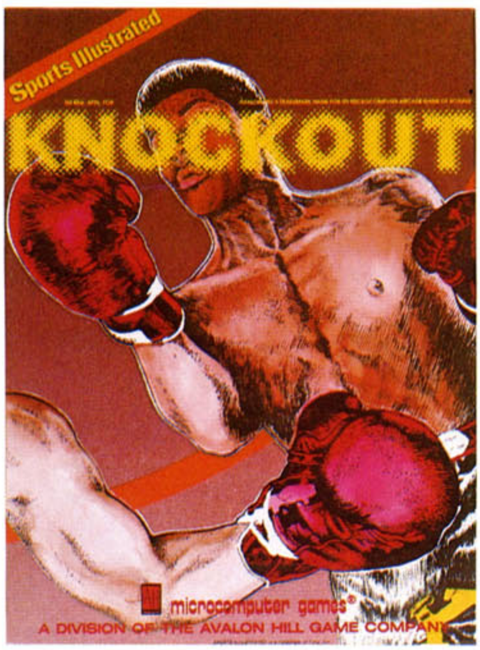
AVALON HILL MICROCOMPUTER

Arcade Paks™

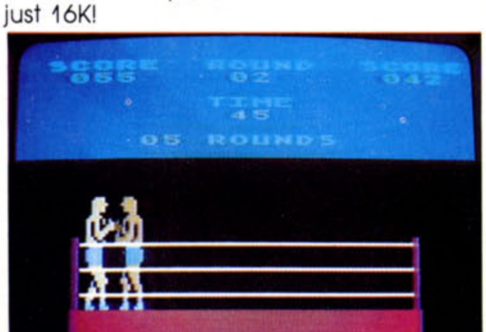


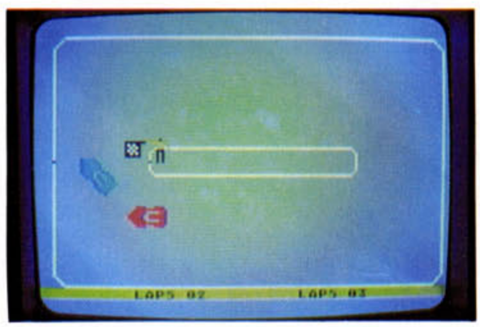
Arcade game fans need not plunk down quarter after quarter no more! Fast action **"ARCADE PAK"** software games are the newest rage from Avalon Hill.





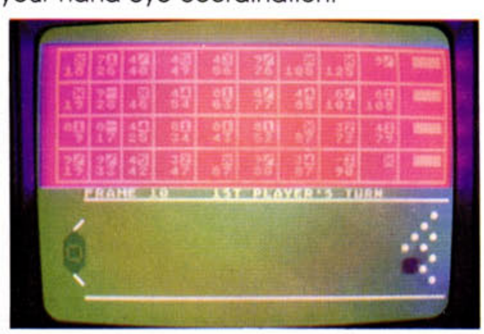
KNOCKOUT is a simulation of the gentlemanly art of self defense for one or two players. Featuring high resolution color graphics each player can control every action taken by his boxer with his joystick apparatus. The outcome of each match will be determined by your own speed and skill. It is in your hands! Available for your ATARI 400 or 800 with just 16K!





ROADRACER allows one or two players to choose a type of race track and a time or lap race before they vie for the checkered flag. The race will be won by steady control of your vehicle traveling at speeds of 50 to 200 miles per hour. Steer into a turn too fast and you'll likely crash into a wall losing valuable time.

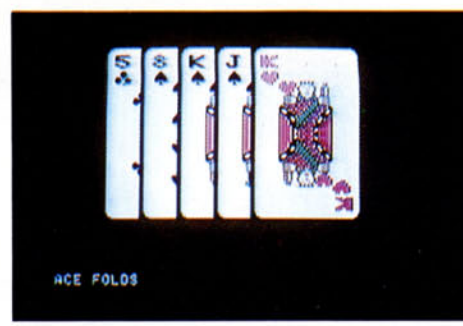
ROADRACER is another new **"ARCADE PAK"** game from Avalon Hill challenging your hand-eye coordination.



BOWLER is the other member of this duet, a one to four player game simulating ten pin bowling.

Players control the direction of their bowling ball as it rolls down the lane altering its deflection and course by depressing their joystick button (Atari) or the appropriate key (PET-CBM, 2001).

Your computer will keep impeccable score each frame!



DRAW POKER

The crowd couldn't make it over for the regular weekly game? Relax your personal computer (available for IBM, Apple, Atari, TRS-80 Mods. I/III, or PET CBM, 2001) will play 5 Card DRAW POKER and bring the crowd with it. COMPUTER DRAW POKER sets you up with four other players controlled by the computer. Lucky, Shifty, Ace, and Slim are their names and they play a smart and mean game, each in their own way.

Your opponents will not be afraid to bluff on occasion and they do not bet foolishly. So be prepared to become a high stakes loser or if lady luck is with you, a big time winner.

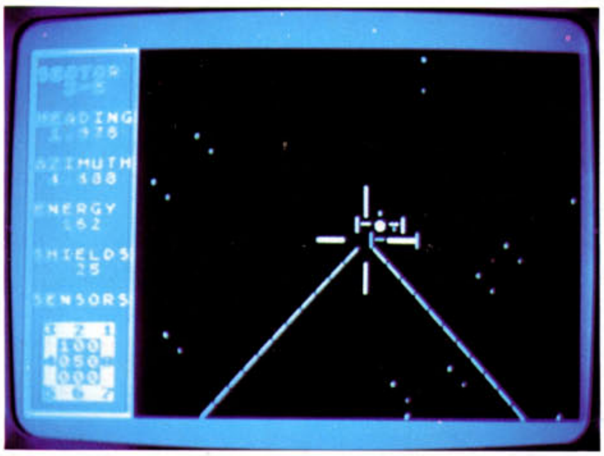
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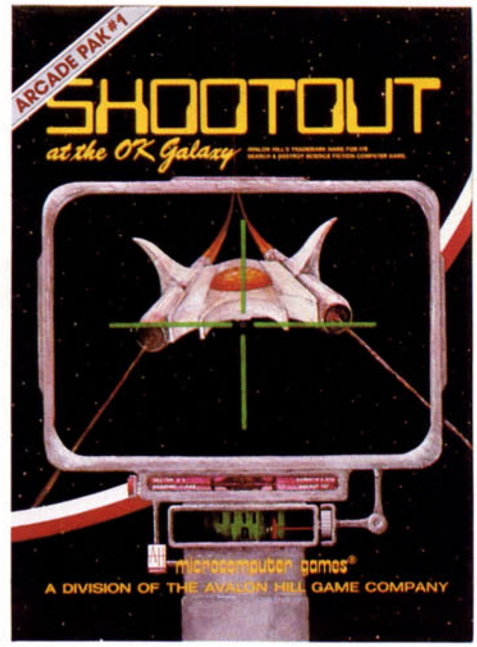
«Arcade Paks»™

from the **Microcomputer Games** people at
the **Avalon Hill Game Company,** Baltimore, Maryland

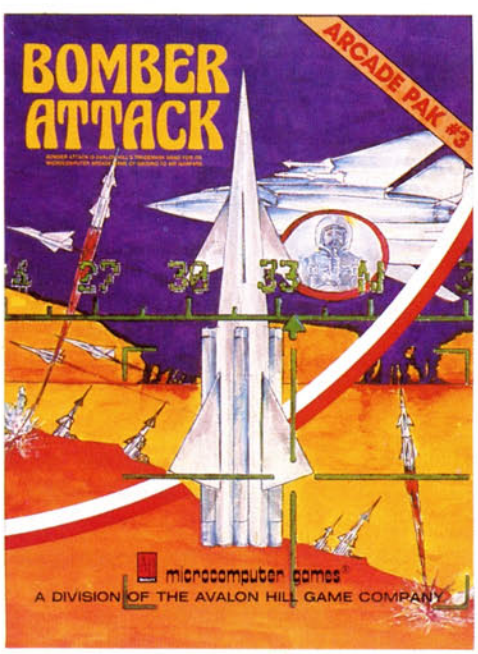
SHOOTOUT
at the OK Galaxy



SHOOTOUT—30 ALIEN WARSHIPS HAVE ENTERED YOUR PATROL ZONE OK, shields up?, energy level . . . check, azimuth set?, yup. This may sound like the latest summer space movie thriller but in fact it's the preparations YOU will make when playing Avalon Hill's new arcade strategy game **SHOOTOUT AT THE OK GALAXY.** Over 2 years in the making, **SHOOTOUT** is purely graphical combining arcade excitement with just the right touch of strategy. Available direct from Avalon Hill or at fine computer and hobby stores everywhere. Compatible with all the popular micros. Call toll-free, to order using your major credit card 1-800-638-9292 or see our ad inside for additional information.



BOMBER ATTACK



BOMBER ATTACK—Arcade game of Ground to air warfare, **BOMBER ATTACK** is a real time fast action game that puts you in command of a supersonic bomber over enemy terrain. You must drop all 25 bombs on key locations before the enemy can down your bomber. But watch out for Red Cross hospitals, they're neutral ground as provided in the Geneva Convention! Compatible with your Atari 400/800®, Apple II+®, and Commodore PET®. Order toll-free 1-800-638-9292 or see our ad inside for mail order details.

